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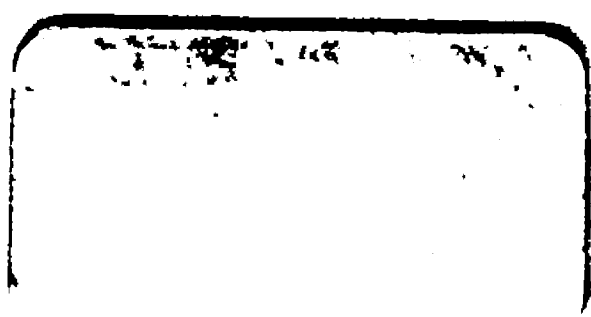
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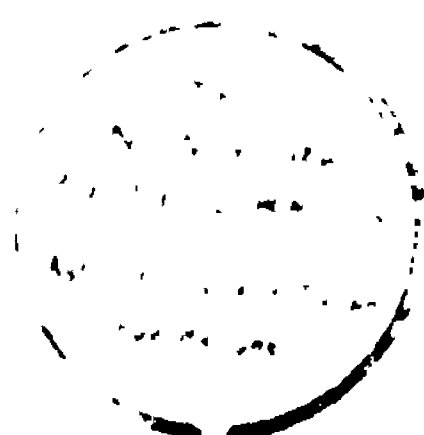


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Knock

THE GREAT PACIFIC COAST

THE GREAT PACIFIC COAST



THE AUTHOR: TRAVEL IN THE SNOWY ANDES.

THE GREAT PACIFIC COAST

*TWELVE THOUSAND MILES IN THE
GOLDEN WEST*

BEING AN ACCOUNT OF LIFE AND TRAVEL IN THE
WESTERN STATES OF NORTH AND SOUTH
AMERICA, FROM CALIFORNIA, BRITISH
COLUMBIA, AND ALASKA: TO MEXICO,
PANAMA, PERU AND CHILE; AND A
STUDY OF THEIR PHYSICAL
AND POLITICAL
CONDITIONS

BY

C. REGINALD ENOCK, F.R.G.S.

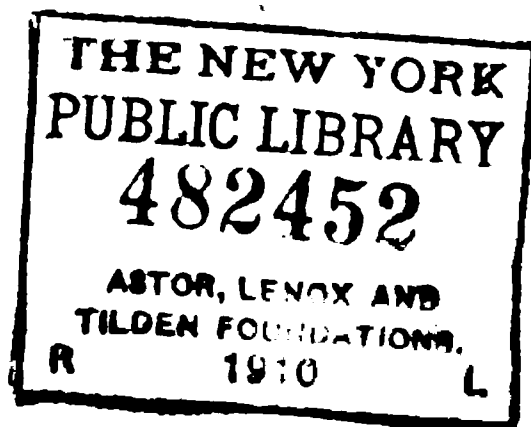
AUTHOR OF "THE ANDES AND THE AMAZON," "PERU," "MEXICO," ETC.

*WITH SIXTY-FOUR FULL-PAGE ILLUSTRATIONS
AND A MAP*

NEW YORK

CHARLES SCRIBNER'S SONS

1910
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PREFACE

THE purpose of the present work is to treat of the vast region of the Pacific Coast of North and South America as a physical and political entity, seen from the point of view of the observant traveller from journeys extending over a number of years: a task never perhaps attempted before. The excellent reception accorded to my former travel books, dealing with some of the States of South and North America, is borne out by the pile of favourable reviews and of numerous letters from readers at home and abroad which I have; and the several editions which have been reached in a short space: and these seem to offer a measure of popularity for the present work. To those (few) reviewers who have objected to intimate descriptions I would reply that these books, having at base a geographical purpose, are written to interest the ordinary reader and student of travel-lore, rather than for the scientist.

THE AUTHOR.

London, October 1909.

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I

' TO THE UTTERMOST PARTS OF THE SEA '

THE great region of the West which lies upon the littoral of the Pacific Coast of North and South America is always associated in our minds with some misty glamour of remoteness, conquest and gold. It appeals to us with a certain sense of romance, and yet with a vague sense also of great possibilities, as if Nature had kept and hidden on those mighty shores something for the people of the east which they should obtain by the ardour and energy of their own hearts and hands. It is a land of El Dorado, which has drawn men forth from Europe and the Atlantic world for four hundred years. I do not know if "Westward star does fortune bring" in very truth. There are various kinds of fortune, as there are various kinds of El Dorados; some of them material, some of them less material, but, whether they were one or both, they have always held out (and doubtless ever will hold out) some strong allurements to the adventurous spirit.

Back to that stirring age of ocean chivalry the history of the Great Pacific Coast takes us; to that pregnant Columbian-Elizabethan time which followed on the giving of America to the world. Men were setting forth in caravels to follow the trail of the setting sun across the heaving waters of the great Unknown. Bold hearts were paramount: with sword on hip and gold in sight; the name of Cristo and Maria on their lips; with oath and prayer, with cross and steel, away they turned their occidental-steering prows—cavalier, boor, sea-rover, all—towards the El Dorados of the West. Gold, pearls, empires lay there for the taking—what wonder that their veins ran wine; what wonder that every sandy bay and mountain peak was but the threshold to some golden

city, and every orison the prelude to some new empire and renown!

They were wonderful old fellows, those conquistadores, and the memory of their strenuous deeds is imperishable upon those mighty shores which face the Pacific sunsets. Balboa, Magallanes, Cortes, Pizarro do but lead us on to Drake and Cook and Franklin; and all these great names did but follow on the result of the greatest geographical obsession which the world has ever known, when the crazy caravels of Columbus set out towards the West. I have not forgotten a doggrel rhyme which I heard in the streets of San Francisco and Chicago at the time of the Columbian Exposition in 1893: the four-hundredth anniversary of America's discovery. The rhyme was a popular expression of this great geographical obsession and its hero—

“He knew the earth was round
That land it could be found—
This geographic, gyratory
Son of a gun of a navigatory
Cristofer Colombo!”

And as to the matter of great discovery, how strongly one fact stands out—the obsessions of single spirits; the convictions of individual men who have believed that some great Thing existed, unknown to mankind, which they themselves should discover. And discover it they did (and will), spite of difficulties, discouragements or slender purses. Neither nations nor syndicates perform these things, for Providence does not send its subtle ray of imagination and faith to governments or limited liability companies, but to the individual spirit; and this it is which is spurred on to action and accomplishment.

But History, which loves to set no limit to its searchings, strives to take us back into the mists of time far beyond Columbus and the conquistadores and their work of yesterday within these Western worlds. It was but four centuries ago when European man first beheld the sun to set in the Pacific Ocean. What happened here before then? Upon these great plains and mighty mountain ranges which face the occident something must have happened between the time when the pyramids and towers of Egypt and Babylon

were building and the mere yesterday of Columbus. How came man upon the littoral of the world of the Andes and the Cordilleras? The Garden of Eden and the valley of the Euphrates, and Ararat and Babel and Canaan are on the other side of the world, fifteen thousand miles away. Yet the sun-god of the Chaldeans and the sun-god of the Aztecs and the Incas cannot be of separate origins; nor the “Unknown God” of the early Mexicans and Peruvians a different spirit to that of Asia; nor the pyramids and temples reared to him in both worlds of independent conception. It is a fascinating thread to follow; but for the moment we must turn to geography.

It is a lengthy geographical flight, good reader, to which I invite your patience and interest in these pages. We must survey the world from north to south, and from the Arctic Circle and the midnight sun to the equator and Cape Horn. From the North-west Passage and Behring Straits down past the Canal of Panama to the Straits of Magellan we shall have to journey—twelve thousand miles of a sunset littoral upon which the surges of the Great Pacific Coast beat ceaselessly. From the frigid shores of Alaska our way will lie to fertile valleys of perpetual spring in paradisial lands (as far as nature is concerned) near the equator; and from sun-beat, arid deserts we shall ascend to the region of perpetual snows. I have watched the sun set in the Pacific from that Isthmus of Panama where it was first seen. Behind Colima’s smoking peak upon the Mexican shore I have seen it, two thousand miles towards the north; and yet another two thousand miles filling up the entrance to the Californian Golden Gate. Again, from the deserts and mountains of Peru and Tarapacá I have watched the sun-god sink in the occident.

Geographically, this long littoral is divided into three regions—North America, Central America and South America; and ethnologically into two—Anglo-America and Spanish America. We shall begin our journey at Panama and proceed northwardly up the coasts of Central America, Mexico, California, British Columbia and Alaska. Then, starting again at Panama, we shall survey southwardly, Colombia, Ecuador, Peru and Chile. In order to obtain a general idea of this great coast and the different political

4 THE GREAT PACIFIC COAST

and geographical spheres into which it is divided, I will beg your attention, good reader, to the following figures which give the different Pacific Coast states in sequence, beginning at the north. The second and third columns give, respectively, the general length of their coast-lines, and their approximate latitudes: figures which have reference to their distances on the Pacific Coast alone.

Alaska (from Behring Straits)	1,800 miles	65°	to 55°	N.
British Columbia	600 "	55°	" 49°	"
Washington }				
Oregon }	500 "	49°	" 42°	"
California	800 "	42°	" 33°	"
Mexico	2,000 "	33°	" 15°	"
Guatemala	160 "	}	15°	" 7° "
Salvador	190 "			
Honduras	50 "			
Nicaragua	200 "			
Costa Rica	250 "			
Panama	400 "			
Colombia	400 "	7°	" 1°	"
Ecuador	400 "	1°	" 3°30'	S.
Peru	1,400 "	3°30'	" 19°	"
Chile	2,700 "	19°	" 56°	"

As to the longitude of this vast coast the 166th meridian W. cuts the westernmost point of all America, Cape Prince of Wales in Alaska abutting on Behring Straits; whilst the 70th meridian W. divides the Straits of Magellan. This we shall recollect is about the longitude of Boston and Quebec, which reminds us that nearly the whole of the continent of South America lies to the east of North America.

The Pacific Coast consists, to use the phrase of the engineer, of vast sweeping curves and tangents, with a general direction of north to north-west. The most remarkable thing about it is its freedom from great indentations and consequent lack of harbours; that is, in comparison with the shore-lines of the other continents of the world. We can easily see the cause of this. The whole coast, whether of South or of North America, is paralleled by a great mountain chain at a relatively short distance inland—the Andes and the Cordillera generally of North America. (In this connection I shall use the general term of "Cordillera" to describe the mountain range of the Pacific coast as an entity. This is a Spanish

word, but it is the most appropriate for the purpose.) The Cordillera, then, is responsible for the structure of the coast, —which does but obey its parent form—the one being, let us say, Tertiary; the other, let us say, Quaternary, and the long upraised wall which these mountains form has shut off the ocean from the interior and given rise to a poverty of inlets. This circumstance is of much importance when man comes on the scene, for few inlets mean few harbours. Throughout the great stretch of coast of nearly eight thousand miles from Vancouver to Valparaiso we find only about eight really great natural harbours, such as the Columbia River in Oregon, San Francisco in California, Acapulco in Mexico, Panama, Guayaquil in Ecuador, Payta, Chimbote and Callao in Peru. There are, of course, numerous good smaller harbours, but the coast, whether in California, whether in Peru, is notable for the numerous open roadsteads on surf-beat shores, where landing is more or less difficult.

Thus the Great Pacific Coast consists generally of a strip of more or less arid coastal plains, extending for thousands of miles, backed by some of the highest mountain ranges in the world. The rivers which empty into the Pacific Ocean through this wall can almost be counted on the fingers of one hand. These are the Yukon in Alaska, the Fraser in British Columbia, the Columbia in Oregon, the Colorado, emptying into the Gulf of California in Mexico, and the Guayas River in Ecuador.

These considerations bring us naturally to glance at the Cordillera system of this great coast; the Andes and their continuation, from Patagonia to Alaska. If we were to take a sphere or ball with a hard or slightly flexible outside part, and cause it to contract from the interior, what would happen? A series of wrinkles would appear upon its surface, their form, length and direction depending upon the nature of the outside part of this ball. This is what happened to the earth in Tertiary times (or thereabouts). The earth contracted, and great corrugations appeared upon its surface, perhaps rapidly, perhaps by successive stages; and these are our familiar mountains. Among the greatest, most continuous, highest and largest of these great wrinkles on the face of mother earth are the Andes; the great Cordilleras of South

and North America, which encircle nearly a semi-diameter of the globe from north-north-west to south-south-east.

This vast Pacific-fronting Cordillera system, from twelve to thirteen thousand miles in length, consists of several parallel chains—two, and in places three—divided by great plateaux and deep river valleys, whose extremities are formed by “knots,” or counterforts; the transversal ridges which join the ranges to each other. The most marked of these features are the sierras and coast ranges of British Columbia and California, with their great basins and plateaux going back to the Rocky Mountains; the Sierra Madres of Mexico with the great Central Plateau; the three paralleling cordilleras of the Andes in Peru and Bolivia, enclosing the great plateau of Titicaca and the longitudinal valleys of the Amazon affluents; and the cordilleras and valleys of Chile.

Whilst the Rocky Mountains, Coast Ranges and Sierra Nevadas of North America are grand and vast in their formation, the greatest development of the Cordillera and its most stupendous structure has come to being in Ecuador, Peru and Bolivia. Here are the highest passes, the highest peaks and the greatest expanses of perpetual snow, and, incidentally, the highest inhabited places on the globe.

I have stood upon these white heights of Peru, where the hydrographic worlds of East and West meet—for the Andes are the *divortia aquarum*, the water-parting of the globe, between the Atlantic and Pacific worlds—a score of times, perhaps more than any other European. The Andes are a veritable psalm in stone, a mighty and glorious entity such as Solomon or David might have sung of. Here are, indeed, the “treasures of the snow” displayed for the adventurous traveller; here is the perpetual ice-cap of gleaming summits, nature’s store-houses of moisture, performing an ordained and declared function, a mighty hydraulic machine whose operation and energy arouse the reverent admiration of the human engineer; and whose results render possible for man the bounties of seed-time and harvest in the countries at their base. Let us consider for a moment, kind reader, the working of this stupendous engine. The moisture-laden winds, sweeping from the Atlantic Ocean and thence over the boundless plain of the Amazon basin, two or three thousand

PERPETUAL SNOW-CAP IN THE PERUVIAN ANDES.

Photos by the Author at 15,000 and 16,000 feet above sea-level



miles in breadth, impinge upon the intercepting summit of the Andes, depositing their moisture as ice and snow thereon down to the limit of the snow-line, and as rain below that. These winds do not reach the Pacific Coast, and the littoral of Peru and Northern Chile is consequently rainless; but the Andine hydraulic machine, nevertheless, fulfils its function in the streams which escape down the western slope, which provide the means of irrigation and agriculture to the dwellers of the coast. This is a somewhat similar working to that which takes place in California; the translation of snow-flakes into terms of corn, wine and oil. In California and British Columbia, however, the conditions are reversed, as the prevailing winds come from the west, not the east. Associated also with these hydrographic and climatic conditions are the great ocean currents which impinge upon the Pacific Coast, performing important functions in the determining of temperature and rainfall, and the anthropogeographical conditions consequent thereon. The great equatorial current, coming from the south, divides, and one fork, the Peruvian or Humbolt current, sweeps its cool volume along the Pacific Coast of South America until the westward-trending bulge of Northern Peru deflects it outwards and away. As a result of this and the working of the Andine hydraulic engine, the coast of Peru is bare and arid, and the coast of Ecuador a tropical jungle. As to the North Pacific coast it is the Japan current which influences it. This great current, deflected from the coast of Asia between the Philippines and Japan, is a warm ocean-river flowing northwardly, sending one fork along the Kamchatka peninsula into Behring Sea and thus to the Arctic Ocean, along those frigid shores of Alaska, which we shall presently visit. But its larger branch crosses the North Pacific Ocean, and, splitting, curves northwardly to Alaska again, but southwardly also, to bathe the shores of that gate of British empire—British Columbia—performing for it the same function which the Gulf Stream performs for Britain. Thence it joins the variable Mexican current, running along the coasts of California and Mexico, where a semi-arid belt is again encountered. Thus we see what a remarkable working machine, ceaseless in its activity, is the hydrographic system of this

great coast, extending over more than twelve thousand miles, influencing every kind of climate under the sun, and giving origin to, and forming the habitat of, every species of flora and fauna from the Arctic Circle to the equator.

This hemisphere-encircling Cordillera is marked at both ends by shattered termini. At the north we have the fjords of British Columbia, and the islands, formed of submerged mountain tops, of Alaska; and in the south of Chile are similar submerged hills and sea-openings. All of these end in storms and snow, and mark the line of life-limit of the human family; extending thence into the silent untrodden spheres of the Arctic and the Antarctic. Nature, at these far extremities of the Great Pacific Coast, has ended her work in a whirl of untamed elements, and, "Thus far, and no further," has she said to the beings of her final creation. And in her plan—benignant or malignant—Nature has used not only ice but fire. For she has a girdle about the middle of the great Cordillera, a line of appalling volcanoes, whence she has flung death and devastation far and wide and told a terrible tale of earthquakes and tidal waves.

I shall shortly describe, in a following chapter, the more intimate condition of the snowy regions of this mighty Cordillera, which offers alluring ground for the adventurous mountain-climber, whether in the north, as Alaska, British Columbia or California; whether in the Andes of the south. I have crossed, as before mentioned, these beautiful stupendous Andes many times and dwelt therein for long periods, and from their winds, snows, summits and sunsets have imbibed some spirit of mountain-philosophy which remains imprinted on my mind. I retain vivid recollections of journeys across the high ranges of the Andes—journeys accomplished amid the pelting and beating of the incessant snow and rain-storms which nature only holds in momentary leash upon those inclement ridges of the world's roof. I have often had to thank (or blame) myself for difficulties experienced on such expeditions (I must confess it) from under-rating difficulties both of time and space; and these two potent masters of circumstance sometimes read the adventurous traveller a lesson. They urge him to recollect that there is a golden mean between too much temerity and an

overrating of obstacle. Yet I must add that, in my travels, I have often found that difficulties were in reality much less than appeared before tackling them, or than represented by advisers. I do not make this assertion as a mere platitude, but as a fact which seems new every time we experience it.

This great region of the Pacific littoral of America gives us food for thought in the matter of the conquest by man of nature. Vast areas of the region tributary to it are still untouched. We must recollect that in South America we are standing upon the edge of the “Dark Continent” of America. For South America is the least known, in the twentieth century, of all the continents of the world. There is more to do there than in Africa. Vast areas have never been trodden by the foot of the white man, whilst millions of square miles are practically unexplored. An enormous zone of territory, from Venezuela down to Chile, several thousand miles in length, is without any settlement of civilized man, delivered over (what might be an empire of the New World) principally to savages and monkeys. Impenetrable forests, swollen streams, malarias and the wild denizens of the tropics still hold undisputed reign over unexplored areas much larger than any existing in Africa. Notwithstanding that the cities along the coast, as well as upon the northern and eastern side of the continent were built in the Columbian era; notwithstanding that the oldest and most advanced American civilization—that of the Incas and pre-Incas—existed upon its western littoral; notwithstanding its wealth of gold, and minerals, and forest reserves, civilization, commerce and enterprise have scarcely done more than touch the fringe of the coasts. The largest river in the world pierces its very heart from Pará to the Peruvian Andes—three thousand miles of fluvial highway with fifty thousand more of interior natural waterway tributary to it from all points of the compass. This is the mighty Amazon and its affluents. Yet from its first discovery by the Pizarros, and navigation by Orellana, and its descent and ascent by Texeira more than three hundred and fifty years ago, a single monthly ocean steamer represents the shipping from Europe on its upper reaches. A great part of Colombia is unknown; huge tracts in Northern Brazil have never been

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seen by a white man; and Peru, Bolivia and Ecuador have absolutely untrodden wilds marked "unexplored" upon their maps. When will this giant awake?

The peoples of the world of this long coast are divided, as we have seen, into two chief races: the Anglo-American and the Spanish-American. The first hold sway from Alaska to Mexico; the second from Mexico to Cape Horn; and theirs is the largest stretch of territory as regards sea-front, although not the most valuable. The most typical countries of these nationalities, respectively, are: British Columbia and California of the white, or Anglo-American peoples, and Mexico, Peru, Colombia and Chile of the Spanish-American or partly red race.

The Empire of Britain has a splendid heritage on this coast in British Columbia and the huge Dominion of Canada, of which it is the sea-front. It is an enormous region: to look at the map of which alone is to fire the enthusiasm of the imperialist-minded geographer—not the dry-bones geographer of mere musty books, do I mean, but the real earth-writer, who, even if in terms of meridians and mountains, sets forth the beauty of nature and the bounty of Providence. Wake up, Britannia! Here are glorious stretches of fertile lands, hills of timber and wealth of minerals and smiling valleys. Come out of your close cities and dwell in the land, people of congested Britain! Is the star of Britain to wane and set, and the constellations of Nippon, of the Stars and Stripes, of the Teuton, to take its place, as we are telling ourselves? It depends, the philosophical observer cannot but think, upon our British selves. No empire in the world's history has ever received such benefits and opportunities as Providence and nature have bestowed upon this empire. No nation has ever had the dominion of a quarter of the land area of the globe, embodying continents of virgin and fertile soil. Are we making use of these gifts? If not, we shall be punished for the sin of omission. It is not enough to fling open our over-sea possessions to the foreigner because he has a sound body and ten dollars in his pocket, nor to grasping syndicates nor mere company-agriculturalists. We must endow a new and vigorous peasantry of our own race with these lands; apportion each that Share of Empire which

THE CAPITAL OF BRITISH COLUMBIA



is his birthright. If we do not we may suffer. I hope to arouse your interest in this matter, good British reader, on another page. In California there is no need for such a call for redistribution of men and land, for the stream of American humanity is fast extending westward.

As to Mexico, nature seems to be holding the land in reserve for the developing Spanish-American civilization, of which that country is the northern boundary and in some respects the main exponent. We have a land of great high tablelands, tropic lowlands, and forest areas, interspersed with the beautiful buildings of the Aztecs and of the Spaniards—a land where the modern seller of foreign goods is strenuously opening markets among the people who dwell there, whether to their benefit or otherwise I will not here undertake to suggest. A picturesque, romantic and potential land it is, whose future is still a problem.

In South America very similar conditions hold good—Colombia, Peru, Chile; yet all have their individuality and separate problems. Peru, in the popular mind, has ever been a land of El Dorado. As we behold the country from the deck of the approaching steamer, visions of Pizarro and the untold gold of the Incas crowd upon us; and raising our eyes to that far, blue maritime cordillera of the Andes, which arises to the east, we feel some of the charm of the Great Unknown which actuated the famous conquistadores of the age of ocean chivalry. Beyond that great natural barrier of mountains, shutting off the blue Pacific Ocean and the deserts of the coast from the interior, lay the strange empire of the Incas; soon to fall before a handful of European adventurers. This was nearly four centuries ago. What lies beyond it to-day? There are gold mines; untold wealth of silver; there is copper and coal and quicksilver in abundance; and farther on yet there is wealth of rubber and timber and chocolate and sugar-cane, great herds of sheep and cattle and alpacas, and many other matters of satisfaction to the traveller, the capitalist, and the merchant. Upon those high plateaux, miles above the level of the sea and beyond the serrated edge of the Andes, upon which we are looking, are the beautiful old stone temples and palaces of a prehistoric race, some of which rival in massiveness and ingenuity the famous monu-

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ments of Egypt. Upon that great roof of the South American world, whose outer edge alone is visible to us from the coast, are treasures such as might enrich a whole nation, and fill fleets of plate-ships such as Drake and the kings of Spain never dreamed of. I have met weary mules staggering under the weight of ingots of solid gold and silver, as they brushed against me on the mountain trails; whilst in my own saddle-bags were plates of gold and bags of gold-dust which I had won myself from the rivers and rocks of the Andes. And far beyond the great cordilleras we shall see canoe-loads of "black gold," the rubber from the forests, as the rubber-gatherer shoots down the rapids of the Amazon affluents towards the Iquitos market. The wealth of an empire lies within and beyond the Andes and upon the Peruvian Amazon, waiting only the set of humanity that way, to gather it in for humanity's use.

As to the origin of man upon this coast, to which I have referred earlier, the attention of the student is at once called to the analogy between the civilizations of Mexico and Peru, of Aztecs, Toltecs and the Incas respectively, and their respective environments. In the valley of Mexico—a hydrographic entity or lake-basin on a high plateau—we find pyramids to the sun and to the moon at Teotihuacan; and in Peru (three thousand miles away to the south), temples to the sun and to the moon in the region of Lake Titicaca, itself also a hydrographic entity upon a high tableland. The mystic deity Ea of the Chaldeans and Babylonians might seem to be reproduced in the Mexican "unknown god," as imagined by Nezahualcoyotl, the Mexican prince-philosopher (who has been termed the Solomon of Anahuac), in pre-Hispanic days; and the chaste imagery of Huiracocha and Pachacamac of the Incas and pre-Incas of Peru. I do not think the student of these matters will deny that these civilizations came from Asia. But how? Geography seems to point to the approaching shores of Behring Straits, only a few miles apart. Probably man (as well as the ancestor of the mountain sheep and the American camel, the Llama) came that way; perhaps across the ice of those Straits, bearing in his bosom some knowledge of a Deity and of the stone-shaping arts.

The histories of the two main centres of pre-Columbian civilization, Mexico and Peru—how were they handed down? In Mexico the picture-writing, supplemented by oral description, formed the literature of the Aztecs, a more or less clumsy hieroglyphical method of showing incidents in line and colour. Some phonetic signs were in use, such as might have formed the basis for the evolution of an alphabet. As to Peru, the Incas had no hieroglyphical mode of representing incident. Their records were the singular *quipos*, consisting of bundles of knotted cords and strings of different colours—every knot and string telling its historical tale under the fingers of the historians who were specially trained and appointed to this office. Thus the hiatus between the pre-Hispanic history of America and its continuity with the European advent was bridged over, notwithstanding that the Spaniards infamously destroyed knots, papyrus scrolls and stone monuments, averring that they were “things of the devil.” Nature has not spared man’s blood in watering the territories of her new world. The great wars and conquests of the Aztecs over the adjoining tribes in the land of Mexico centuries before the advent of Cortes, the subjugation of neighbouring civilizations and savages on the slopes and plateaux of the Andes by the great Inca emperors centuries before Pizarro, show the toll she exacted. That stern and unwavering edict, “Whosoever sheds man’s blood by man shall his blood be shed,” was never more realized; and well the man of Spanish race in America knows that “El que á cuchillo mata, á cuchillo muere!” The terrible struggle before Tenochtitlan,¹ in which the waters of the Mexican lakes were mixed with Christian and pagan blood, proved it. In the Anglo-American portion of the coast nature has not required such sanguinary baptisms. Are we to hope that such may not be required in the future? Yet—are these possibilities of “yellow peril” in store for the Great Coast? Shall Asiatic peoples—who in the past must have played some part there—play a more strenuous part in the future? The land of the rising sun faces the land of the setting sun!

Man and nature have both played havoc in the past history

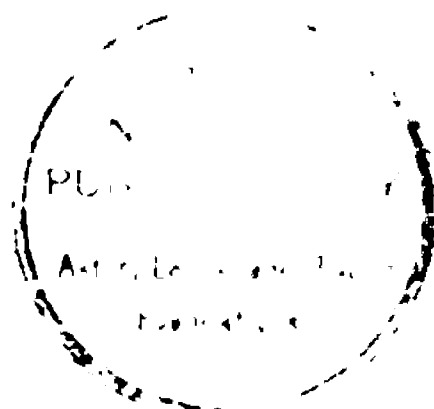
¹ The Aztec city of Mexico.

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of this great coast. Indeed, it is a record of buccaneers since the time of Drake, and of earthquakes and tidal waves for as long as we know it. The appalling earthquake which laid the city of Valparaiso in ruins in August 1906 was only one of a series on the Great Pacific Coast; for San Francisco had been devastated just before, in April, whilst in January the republic of Columbia suffered. The Valparaiso occurrence did not receive the scientific investigation accorded to the San Francisco disaster—the character of the two peoples being the determining factors in this. The one wrings its hands and its priests importune Heaven for clemency; the other sees only a natural phenomenon, which it sets itself to examine. Curiously the Valparaiso shock was unaccompanied by a tidal wave, such as in earlier years caused such havoc on the Peruvian coast to the north of Chile. It was reported at the time that the isle of Juan Fernandez—the home of Robinson Crusoe—had been wiped out by the same shock, and many felt a pang of regret for that island-home where they had lived many days in their boyhoods' dreams. But it was neither true nor possible, for the island is four hundred miles away from Chile, as large as Jersey, and rises three thousand feet above sea-level.

Was it a lesson to the people of San Francisco and Valparaiso, those terrible visitations? Will they mend their ways to a cleaner civilization? Probably not, or not as a result thereof. The modern Anglo-American believes in no such divine wrath, and naturally sees in it nothing but a phenomenon of nature's forces. How different the Spanish peoples on the Great Pacific Coast. In Mexico, or Lima, or Valparaiso there was weeping and wailing and gnashing of teeth during the visitations; there was self-inflicted penance; processions of priests; feverish confessional and hasty marriages after clandestine amours! But the sturdy Californian believes that Heaven helps those who help themselves; and steel and stone are again rising in Babel-towers and pyramids beside the Golden Gate. They are beautiful buildings, unique examples of man's skill and energy—are they but costly food again for earthquake and fire? Well might the dweller of the cities of the Great Pacific Coast,

SAN FRANCISCO, RISEN FROM ITS ASHES.



Anglo or Spanish, cast his eyes upwards towards his blue sky, and murmur :

“Cut me not off in the midst of my days :
Thy years are throughout all generations !”

It is recorded that, when the United States’ battleships made the recent sensational circumnavigation of America from New York to San Francisco (and thence around the world), as the wave-beaten vessels and sun-tanned crew ascended the Mexican coast and approached San Diego, the first seaport past the Mexican boundary in California, and beheld the hills of the Golden State, that a grizzled quartermaster upon the deck said, extending his arms, “There’s God’s own country, and them’s God’s own people.” It was a patriotic sentiment, and is a common saying in the United States, and probably in this case expressed a sense of supposed Anglo-American superiority over the Latin races, at whose ports the vessels had called from Brazil to Ecuador, and where they had received much hospitality. But it is in no unkind spirit that the mind of the impartial traveller may question whether California and the United States are yet, morally, in a condition to lay claim to a monopoly of Divine residence there ! The corrupt politicians and the grasping millionaires of the United States hardly invite the exclusive companionship of the Ark of the Covenant ! The soberest and most God-fearing peoples on that coast at present are the Canadians ; but they do not claim any monopoly of Divine influence there.

There are wonderful things to be beheld within this sunset region. Where else in the world shall we find trees whose seeds were first sprouting when the pyramids were being built upon the banks of the Nile ?—or when Abraham was leaving the Euphrates for the Jordan ? Here they are, in the grand sequoias, redwoods and pines of California, trees four thousand to eight thousand years old, just come to maturity !—which I have fully described in another chapter. Where else shall we find a great inland sea, more than two miles vertically above sea-level, upon which we can sail out of sight of land ? Here it is in Peru and Bolivia ; the great Lake Titicaca. Here, too, are railways, the highest in the

world, which take us from tide-water in a day, up sixteen thousand feet on to the very roof of the world, in the region of perpetual snow; such railways as the Oroya railway of Peru, and others nearly as high. There are, moreover, earth-circling railways which terminate upon this coast, those marvellous highways of the Canadian Pacific and Southern Pacific, and others, crossing thousands of miles of continent. Worthy of panegyric, deserving of enthusiastic attention are the two British railways which cross the broad land of the Dominion of Canada to grasp the beating oceans with their termini. From Quebec to Vancouver; from Halifax in Nova Scotia to Prince Rupert of the north do wind and stretch these mighty ways of steel over a fifth of the globe. The Spanish-American journalist or writer can never speak of a railway purely as such: the simple nomenclature is insufficient, and he terms it generally, "Those bands of steel, linking us with the civilization of the world," or words to that effect; and it might well be excused any inhabitants of the new Western world, whether Canada, California, or Mexico, or Peru to use similarly coloured descriptions. For the railway in these countries is a living and very palpable matter, far more so than in Britain or Europe generally. Unfenced and open to the view in the Americas, the railway seems much more a part of daily life, running down the main streets of towns, prior to crossing mountains and deserts.

Further, where else can such a profusion of mineral wealth be found? As to the mines of Spanish-American countries, Mexico, Colombia and Peru especially, their conditions are such that—beware good reader! for do you lend ear too attentively thereto, you might become a gibbering lunatic within a week. Why?—because there are mines upon mines; mines to be had for the picking up, so to speak, mines on every hill, honeycombing every lode, mines worked by natives and Spaniards and Portuguese centuries ago, and abandoned—not because they were worked out, far from it; but from other reasons, difficulties which do not now exist. There are mines of gold, mines of silver, mines of copper, mines of coal; there are mines walled up by man to hide them when he left them himself, and mines walled up by nature in rock-slide, snow-slide and vegetation. I have entered mines

‘UTTERMOST PARTS OF THE SEA’ 17

in fertile valleys where wine-presses are at work, and agriculture flourishes in fields of perpetual spring; where the smiles of nature seem

“Rain-rippled on dim Paradisial bowers.”

I have entered mines in bleak rocky ranges miles above the level of the sea where—one would think at first—only a mountain goat could climb; mines which pierce the eternal snow-cap with adits and galleries in the bowels of high Andine peaks—peaks looking both towards the Atlantic and towards the Pacific. Such gold and silver in rocks and earth there is as ye may go and have for the taking. I have seen such mines on the Sierra Madres of Anahuac, the land of Mexico, and I have slept in them, breakfasted in them; and upon those far-off slopes where the Marañon rolls by and the ghostly Inca castles start from out the mist. Think of it, good reader, from the depths of your arm-chair! Think of it, ye sleek, top-hatted promoters, hatching wild-cat schemes in the recesses of your London or New York board-rooms! There are mines such as would provide miles of city street with company offices and turn stock-exchanges and brokers’ offices into untenable pandemonium: whilst their mere prospectuses would flood the daily papers with their columns! I am not romancing, good reader. All these exist and more, upon the vast regions tributary to this Great Pacific Coast, and they will be worked some day; perhaps in that age when mining, instead of being more or less organized thieving, has taken on the character of a necessary and equitable industry. There they lie—

“Far away, in some region old,
Where rivers wander o’er sands of gold,
Where the burning rays of the ruby shine,
And the diamond lights up the secret mine!”

There they lie in the rocks and valleys, and upon my own memory and in my musty report-books.

It was the genius of Spain which opened these mines. Spain, indeed, has redeemed the New World more than any other nation from the stamp of being prosaic. The most palpable fact impressed upon us is the refusal of the people of Spanish-America to order their life and to sink their ideals according to the strenuous commercialism which

dominates their northern neighbours, the Anglo-Americans of this same coast. The Spanish-American is heartily rated, as a rule, for his lack of stability and progress in business and modern industrial development, but with the universalist eye and evolutionist purpose with which we, good reader, may say (without presumption) we have set out to observe these peoples of the Great Pacific world, we shall refrain from judging them on this score. As philosophers we shall rather suspect that there is some underlying purpose in nature's work in this respect. "Cada loco con su tema," runs the Spanish proverb, counterpart of our own, "No accounting for tastes" (which, less flatteringly, is to be translated as "Every idiot with his opinion"); and we shall reserve ours on this point, in spite of the strenuous Chicago drummer of lard or machinery-selling firms, who, having taken a round-trip ticket (with "stop-off" privileges) from those enterprising centres of North American civilization, goes hurtling down the Great Plateau of Mexico in Pullman car to the conquest of sample and invoice!

The women of Spanish-America are singularly attractive. Their warm-blooded southern temperament, inherited from Spain and mingled with the sturdy, prolific stock of the aboriginal races, has created a special type which, in addition, has been largely influenced by the tenets and practices of the Roman Catholic religion. The romantic damsels of these lands are both givers and recipients of admiration in a way unknown to the cold American woman of the north. I have observed them in Mexico, in Ecuador, Peru, Chile, and there are the same languorous and meaning glances; the same flash of the expressive eyes; the same throbbing personality yearning with desire. Let us but walk around the plaza—what languishing glances we shall see, from maiden of ten to the ripe matron! If the cold and child-shirking woman of the north does not have a care her ardent sister of the south will bring larger races to fruition in the coming centuries! A singular fact may strike the observer—the women of Spanish-America seem superior to their men; their ideals higher and minds broader. But the main circumstance of social life in the Spanish American countries of the Pacific coast, Mexico, Colombia, Peru, we shall find, is the ancient

ecclesiastical *régime* transplanted from the old world. Now we, as philosophers, may despise and even censure these ecclesiastics (they are worthy of censure and praise; I know them well), but there is another point of view from which to regard them. They brought with them much of refinement and discipline, such as Anglo-America lacks. The hand of the Church weighed terribly, it is true, upon Colonial Spain, but it implanted refinement and traditions which are of great value to the people to-day. The priests and their methods have kept the people back in the path of progress and enlightenment; but the future may show that there are compensating circumstances from the “crowned and mitred tyranny” of Spain; and even the impartial observer of the present knows that there is more spirit of true refinement in Spanish-American communities than in any Anglo-American countries, whether the United States, Canada or other British self-governing colonies.

In matters of bloodshed and suffering the two races inhabiting the coast differ much. The Mexican or Chilean native regards a knife-thrust or mangled limb with a certain amount of equanimity, but any internal matter, such as a severe stomach-ache or tooth-ache sets him complaining like a child. In my travels in Spanish America I have noticed the peculiarity, and one day one of my men was binding up a great cut received in a fight, without any fuss whatever, whilst another of them happened to be groaning with a belly-ache. I once gave a small phial of somebody’s patent “painkiller” which I happened to have by me to an old fellow on the top of the Andes, in a remote Indian village, to stop his tooth-ache, which it did, to his irrepressible gratitude. He said he was going to send some gold nuggets to the makers at the address on the label! The Anglo-Saxon, on the other hand, shrinks from bloodshed and more easily supports natural ills of the body. In their treatment of animals also the two races differ much, and it is safe to say that if there existed a society for the prevention of cruelty to animals in Mexico or South American countries the prisons would soon be full! As regards the characteristics of the people and land of Spanish America generally, some Spanish writer (I think) has described them in three lines of an epigram

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which takes the form of a rather terrible indictment, and which, like all such, must be set down as not proven—

“Flores sin olor,
Hombres sin honor,
Mujeres sin pudor!”

which must be translated as—

“Flowers without perfume,
Men without honour
Women without modesty!”

I do not think any traveller in Spanish America would bear this out. The flowers of Mexico and Peru often have a delicious aroma; the women have splendid qualities, as I have set forth elsewhere in these pages, and are, as regards chastity, what their men make them; whilst as to the latter, their trickery in business is probably not much more than that of the many unpunished rogues of London or New York financial circles, or of the dishonourable politicians of San Francisco, Chicago or “Tammany” generally.

But let us set forth now on our long journey down this great coast and see what contrasts of civilization and of rugged nature it presents. We shall be much with nature here, yet bent upon some definite object even in the wilds. For to be at rest with himself in the wilds the traveller must be there with some earnest purpose. No mere meandering will satisfy him—or it will not satisfy nature. Nature is a stern mother, singing at times a lullaby; at others distinctly asking us what we are doing, as if she would turn our minds away from pusillanimous poetic ease to fields of action and accomplishment. The wind in the pine-trees, the long-drawn surf upon the shore—they exhort us with a touch of reproach as if our time of repose were not yet. So with an open and evolutionist mind shall we set out, to hear what things of good (or evil) report we may encounter.

Twelve thousand miles in the Golden West is the road which lies before us, and this great coast will greet us under sunsets of crimson and gold. Glacier-bound, volcano-fringed and washed by lines of everlasting surf it lies, and we shall “take the wings of the morning and fly to the uttermost parts of the sea.”

MOUNT RAINIER OR TACOMA : THE PATRIARCH OF THE CASCADES

4-2

II

THE HISTORY OF THE GREAT COAST

WHEN and where did European man first set eyes upon the Pacific Ocean, and tread the strand of its coast? It is the year 1513, and a Spanish conquistador, surrounded by sixty of his followers upon one memorable day, is standing on the summit of a range of mountains which they have ascended from the east. The sun is setting, and as the leader tops the summit he gazes earnestly and long towards the west; and with an exclamation which attracts his companions' attention, points forward with outstretched arm. What do they see? Something never seen before by the white man. They see a world of waters stretching away under the sunset: an unknown ocean. The Spaniard was Vasco Nuñez de Balboa; the hill upon which he stood was a peak in the isthmus of Darien or Panama, and the waters stretching away on his horizon were that great sea afterwards called the Pacific Ocean. And on the fourth day following the Spaniards made their way over the wild intervening land and arrived upon that unknown shore; and rushing waist-deep into the surf Balboa drew his sword and waved it over the face of the waters, taking possession of the ocean and the land on either hand for the king of Spain.

It was an enormous claim to make. On the one hand—although, of course, Balboa knew it not—the land stretched to the north for eight thousand miles to where it touches the fringe of Asia; on the other it extended through the South Sea to that equally unknown Cape of Storms, the Horn, five thousand miles below. Truly it was a world-encircling littoral to which at that moment discovery gave the title-deeds to the genius of Spain!

Balboa had pierced the very heart and centre of the Great Pacific Coast; that slender topographical link of the isthmus

of Panama which joins the great continents of North and South America. But it was not enough to see and touch the ocean; and Balboa with a train of Indians brought timbers from the Atlantic side and built and launched vessels, and coasting along those sunset shores gathered in gold and pearls. This was in 1517. His way across the isthmus was marked in blood—as the way of the Spanish conquistadores generally was—the blood of the poor Indians, for hundreds of these human beasts of burden died under their taskmasters' lash in their march with this shipbuilding material, across the rugged isthmus. Balboa, however, accomplished little beyond small coasting expeditions, although he and his followers gave the name of Peru to the southward-stretching land below Panama. Balboa, soon afterwards, was executed, as a result of the machination of jealous rivals, dying a violent death, like most of the conquistadores.

Ever since the time of Columbus, twenty years before these events, the Spaniards had been obsessed by the idea of and belief in the existence of a "strait," which should give access from the Atlantic Ocean to the West, and so to the Orient; and their bold mariners had been diligently searching therefor; and now that it was seen that only a few miles of land separated the great oceans, as demonstrated by Balboa, the search which had slackened from the discouragement of continual non-success was greatly stimulated. Not only was this urgent and persistent belief in the existence of a strait indulged in by the Spanish, but the other maritime nations of Europe cherished it equally; and to the persistent exploration which obeyed it was due the rapid geographical knowledge which was gained of the Atlantic coast of North America. The great rivers of that continent were confidently expected to give access to the Pacific, but the mariner-explorers were repeatedly baffled. The Spaniards, it is more than probable, sought a strait more with the object of holding it against other nations, in order to render inviolate their undisputed ownership of the Great Pacific Coast at that period.

But following closely on the exploit of Balboa came another romantic and stormy chapter of discovery—the conquest of Mexico. On a memorable day—it was Good Friday, the 21st of April, in the year 1519—Hernando

Cortes and his followers landed on the shores which they named Vera Cruz, washed by the Gulf of Mexico. How they won their way up the fastnesses of the Mexican Cordillera, beset betwixt allies and savage foes, and how the lake-city of Mexico fell at length before them forms, perhaps, the most thrilling chapter of that age. It would be beyond the province of this work to enter into much detail upon the conquest of Mexico; and I have given it in another work, to which I may beg to direct the reader's attention. Moreover, that remarkable conquest belongs more to the Atlantic than to the Pacific sphere.

The next incident in the story of the Great Pacific Coast is in 1521, when the Portuguese navigator Fernando de Magallanes with his pilot Sebastian del Cano, a Spaniard, discovered and traversed the straits which bear his name, at the southern extremity of South America; and sailed thence to circumnavigate the globe. Magellan it was who gave the great ocean its name—the Pacific.

Mexico and the Aztec Empire and Panama being in the power and occupation of Spain, the lands of central America soon fell before other of the conquistadores, who followed the exploits of Cortes and Balboa. In central America the ruthless gospel of the Spaniards, with blood, plunder and the Cross, resulted in the discovery of Lake Nicaragua and the Gulf of Fonseca, slightly to the north of Panama; and the river flowing from this lake to the Atlantic waters (the Caribbean Sea) gave birth to the idea—in 1523—of a canal which, cutting through the level land to the west of the lake, might complete the longed-for interoceanic means of communication.* In the history of this region the ruthless Pedrarias Davila has left the memory of his deeds, written, like others of the acts of the conquistadores, in the blood of the natives.

Following upon these traffics and discoveries came the beginnings of another conquest, as startling and romantic as that of Mexico—the conquest of Peru. Another adventurous Spanish navigator, Andagoya, had voyaged down the Pacific Coast southwardly from the New Settlement of Panama, in 1522, towards the region which Balboa had already called “Peru.” Then uprose the famous Pizarro, and in company

with a partner, Diego Almagro, both Spanish men who had sought fortune in this new world of Panama, and had settled on the isthmus, formed a company, and with the licence of the governor of Panama set sail on conquest bent, into the unknown world which stretched away towards the south. This was on November 14, 1524. The exploits of Pizarro are of the most famous in the history of the New World—his conquest of the Inca Empire and the capture of its emperor. But whilst no such perils of savage foes befell the expeditions of Pizarro such as compassed Cortes in Mexico, for the Incas were easily subjugated, other obstacles were encountered; and it was not until November 1532 that the real conquest of Peru was consummated.

Returning now to Cortes, this intrepid conquistador had been appointed by Carlos V of Spain Governor and Captain-General of Mexico in 1522 and ever avid of adding fresh laurels to his name, and obsessed more than any one else by the hopes of the discovery of a "strait," which should give communication between the Atlantic and Pacific waters, sent an expedition to the west, beyond the plains and valley of Anahuac which formed the Aztec and Spanish centre. The wonderful news was brought back of a vast western sea, bounding the continent towards the setting sun. Rightly the conquistador judged this to be the same ocean of Balboa, and his imagination was instantly fired to explore it. On a previous expedition, during the siege of the Aztec city of Mexico in 1519, Cortes had penetrated as far westward as Cuernavaca, near the great Balsas River, upon a punitive expedition; but now he established a naval station on the coast, and sent vessels northward to explore the region above; and in 1534 the southern extremity of the great peninsula now known as Baja or Lower California was discovered. The navigators imagined this peninsula to be an island, and an attempt was made to found a colony upon it, which failed, however. Most of these expeditions sent out by Cortes resulted in disappointment; but the strong impression made upon his imagination by the possibilities of the Great Pacific urged him to further effort and to greater expense—for conquest had brought him both authority and riches. He personally conducted an expedition to Honduras to further

that of his emissary and co-conquistador, Cristobal de Olid, who had been one of his generals in the conquest of Mexico; and upon this expedition it was that the unfortunate Guatemoc, who had accompanied him, was ruthlessly executed. At that period also the conquest of Guatemala was made by Pedro de Alvarado, the rash and impetuous but brave conquistador who also had assisted so prominently in the subjugation of the warlike Aztec Empire.

Whilst these matters were pending the heroic Pizarro and his handful of Spanish adventurers were struggling along the appalling coast zone of Ecuador and Peru, starving often, defeated at times, abandoned by their comrades and suffering by reason of the perversity and opposition of the governor of Panama, who hindered the sending of reinforcements. How they crossed these burning deserts and ascended by the remarkable Inca roads up the mountain fastnesses of the Cordillera of the Andes in search of the Inca potentate—Atahualpa—who ruled those regions; how their horses and guns astounded and overawed the Inca natives, as the horses and guns of Cortes had a short time before impressed the Aztec peoples of Mexico, and how they won great treasure and subdued an empire form the most unforgettable and romantic chapter in the whole history of the Great Pacific Coast. It has fallen to my lot to follow in the footsteps both of Cortes and of Pizarro, in Mexico and Peru, and thither we shall journey, kind reader.

In 1539, after spending large sums of money in sending out more or less fruitless expeditions, Cortes dispatched Don Francisco de Ulloa to explore the Mexican coast northward, with three small ships. One of these was lost; the others sailed up the Gulf of California and reached its head, the delta of the great Colorado River. Thence Ulloa turned southward again, followed the shore of the great peninsula of Baja California, rounded its dangerous headland of San Lucas, and took his way, after battling against adverse winds and currents, up the hitherto unknown waters of the Pacific Coast as far north as Cerros Island, in latitude 28° N. The ships were badly equipped and his crew scurvy-stricken, and Ulloa never returned from that voyage. The only survivors were those of the accompanying vessel, which reached Mexico

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again to render account to Cortes. At this time the star of the world-famous conquistador of Mexico was declining, and the first viceroy, Mendoza, appointed by Carlos V of Spain, came into strong rivalry with Cortes. Now it was that the land expedition of Coronado was sent forth in search of the mythical El Dorado of Cibola, of whose existence stories had come down from the north; and Mendoza further dispatched a fleet under Alarçon to the head of the Gulf of California to support it. Alarçon ascended the Colorado River in boats up to its confluence with the Gila, which enters from Arizona, and thus demonstrated that Lower California was a peninsula and not an island, as had been supposed. It was at this period that the fantastic name of "California" was given to the region. The origin of this appellation is now considered to have been derived from the name of a fabulous island depicted in a Spanish romance or novel of the period.

The governing of "New Spain," as Mexico had been officially termed, was carried on at first by an *Audiencia*, or species of administrative council nominated from Spain by royal decree, and the president of this body—Guzman—treated the natives with great abuse. In Michoacan, one of the Pacific states of Mexico, an unfortunate Indian chief was burned to death in 1527 because he would not give up his treasure, and so the oppression by Spaniards and colonists of the people began its reign, ameliorated in some cases by the acts of good viceroys, and Churchmen, who strove to carry out a juster Imperialism. In 1540 Cortes returned to Spain, practically ousted by the viceroy Mendoza, but the king scarcely listened to his grievances, and, hastened by indifference and ingratitude for his great services, he died in December 1547. Mendoza, the first viceroy, must be described as a good and capable ruler. Under him the first printing-press was established in the New World, and as to exploration he sent out Cabrillo, who penetrated still farther along the Pacific Coast to the north, letting go his anchor in a good harbour, which to-day is that of San Diego, the southernmost of California. As far as is known this was the first appearance of the white man on the shores of that part of the Great Pacific Coast which forms the United States

and British Columbia. The ships of Cabrillo coasted northward valiantly in spite of the terrible south-west gales which they encountered, reaching the Bay of Monterey; but little did they suspect the existence of the now famous Golden Gate—the entrance to San Francisco Bay, when, setting sail again towards the north, blown still by fierce storms, they passed, without seeing them, Point Pinos and Mount Tamalpais—sentinels watching near that famous entrance—passed them and reached latitude 42° . Borne back once more with the veering gale to the south-east—Cabrillo imploring the clemency of the Holy Virgin—they let go anchor at the Farallones and saw from afar the hills around the Golden Gate, and the pine-clad headland. But Nature still guarded her secret places, and the elusive cleft of the great harbour-entrance was below their horizon, and they missed seeing it. Still, they were the first Europeans to see its surroundings. Cabrillo died upon this voyage, but his pilot, Ferelo, another typical man of the times, eager for fame for himself and added glory for Spain, again pressed northwards under an appalling gale and again returned, and still the secret of the Golden Gate remained unlearned.

However, at least the map of the Great Pacific Coast was unrolling, thanks to these gallant men of Spain. From near the present northern boundary of California, southwards through Mexico, Central America, and Panama, and down to Peru, and upwards from Cape Horn the course of this giant coast had now, in the middle of the sixteenth century, been given to the world.

Yet it should rather be said that this great geographical advance was given to Spain, for Spain, having discovered, dominated the Pacific Coast; and the great ocean which washed it was to all intents and purposes a Spanish sea. There was no approach to it save by the appalling Straits of Magellan, and the viceroys, governors and priests who dwelt along that mighty littoral felt as secure there as in their own mother country. For Spain at this period was the mightiest nation in Europe. The sixteenth century belonged to her; Carlos V was the greatest potentate of Christendom; and for over a hundred degrees of latitude his sceptre ruled that far-off region of the Great Pacific Coast.

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Viceroy followed viceroy in Mexico; in Peru and Chile much had taken place; the Inca Empire was a thing of the past; Almagro and Pizarro had both died violent deaths—the latter in June 1541, after a beneficial rule for the country he had dominated. But these were but internal incidents; and the power of Spain was unquestioned in the Pacific-American world.

But as they slumbered thus amid their peaceful bays and valleys and humble Indians, the Spaniards were suddenly aroused by a veritable bolt from the blue—Drake! The great heart of Britain was awakening; the great buccaneers of Britain and Holland were to dispute the Spanish sway upon those peaceful shores. “What!” cried the viceroy of Lima, Don Francisco de Toledo, starting up in consternation when he heard of this, the first “heretic” keel which had ever cloven the waters of the great Pacific Coast, “it cannot be possible. Is not this the sacred dominion of His Most Catholic Majesty of Spain!” Francis Drake, however, held Spanish viceroys as his especial enemies. He had entered the Pacific through the Straits of Magellan, having left Plymouth with Elizabethan permission on December 13, 1577, with a squadron of five ships. Near the town of Valdivia in Chile he captured a treasure-ship, and then sailing northward to Peru fell like a hawk upon Callao; bagged another plate-ship, and, cutting the cables of the other Spanish vessels in the harbour to prevent pursuit, set sail in his flag-ship, the *Golden Hind*, alone, for the squadron had been scattered by the storms of Magellan, to the northward still, hot in the wake of a great galleon full of gold and silver which had just left for Panama. Away they went up the great Pacific Coast, and when the wind dropped they put the boats out and towed the ship for three days. The reward of this strenuous chase was the great plate-ship, which they bagged off Cape Francisco with—it is recorded—nearly a million pounds on board: gold and silver torn from the virgin rocks of the Andes by sacrifice of Indian lives! The daring admiral then continued his northward voyage; as one of his objects was to discover the still hoped-for passage to the Atlantic. Moreover, he knew that Spanish war-vessels would be thoroughly guarding the Magellan

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homeward way, which, as a matter of fact, the outraged Lima viceroy, Toledo, was doing with eleven ships. Northward, then, his prow was turned still, until he reached the latitude of 42° N.—the same latitude which Cabrillo had earlier reached, encountering a cold climate. On June 17, 1579, he entered a good harbour in latitude $38^{\circ} 30'$ (which is believed to be the bay called Drake's Bay on modern maps, a few miles to the north of the Golden Gate of San Francisco), and here the intrepid man of Devon and his sea-dogs took possession of the land for Queen Elizabeth under the name of "New Albion," referring both to their island home of Britain and to the white cliffs of this new land.

Upon the shore of this bay, just under the protecting hook of Point Reyes, Drake repaired the *Golden Hind*, building a wall of stone to protect his crew from the possible attacks of Indians. They landed, moreover, on the south-east Farallon—the rocky islets off the Golden Gate, and secured sea-wolves or seals, the same animals which the traveller of to-day hears barking on that coast. The meat was an acceptable food, the diary of the voyage states, and they laid in a store of it. It is maintained by some authorities that Drake, although he found the "good harbour" under the white cliffs, which he named "New Albion," did not see the entrance to the elusive Golden Gate, nor enter San Francisco Bay, as it was overlapped to his view by the peninsula, or was below his horizon. Probably, however, this must remain a point of geographical doubt, as other authorities hold that Drake discovered the Golden Gate.

Turning thence, Drake bid farewell for the time being to the Great Pacific Coast, which he had so ravished, and directing the prow of the famous *Golden Hind* towards the setting sun, he bore bravely out into the limitless waters of the Pacific Ocean to circumnavigate the world for home—the second who had performed that wondrous deed, leaving the Spanish warships to cruise uselessly about at the bottom of South America.

The close of the sixteenth century marked the beginning of the decline of Spain. In 1588 the Invincible Armada perished, and Spain's sea-power dwindled. Exploration of

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the northern region of the Great Pacific Coast fell off, and except for the voyages of the Spanish emissary Vizcaino, for the fortifying of San Diego and Monterey harbours against buccaneers from Europe, and the visits of the Manila ships trading to the Philippines, no vessels scoured those seas at all, and upper California was uncontrolled save by its own savage indigenes. The stream of filibusters, buccaneers, corsairs and explorers which harried and visited the Spanish-American coasts of Chile, Peru, Panama and Mexico, later, in the following century, of British, Dutch, French and other nationalities, whether intent upon taking toll of defenceless coast towns and their treasures, whether upon more peaceful errands, did not go much to the northwards of Mexico. Spain and the Great Pacific Coast which she ruled slept for more than a century and a half, and England, France and Holland undertook the colonizing of the New World of North America, on the Atlantic. The Pilgrim Fathers sailed, New England was established; Quebec was peopled; the Alleghanies, the Mississippi and other great natural features were found and crossed; British navigators eagerly sought the north-west passage from Hudson Bay to the Pacific, and Spain held Florida. But above all was the rise of Britain; her sea-power dominated everywhere, and she gained possession of the entire half of the North American continent upon the Atlantic.

But in the meantime an important event had occurred on the great Pacific Coast. In 1740 the Russian navigator Behring sighted the coasts of Alaska, the northernmost part of the continent, in the icy Arctic regions; and his name remains to-day in Behring Straits. This remarkable channel is only thirty-five miles in width, separating Asia from America in the Pacific, and connected by the continental shelf. Indeed, it might have been supposed that America would have been discovered and peopled first from that side, where land, islands and ice are almost continuous, instead of by Europeans, who first must cross the Atlantic. Probably it *was* so discovered and peopled by the peoples who, emigrating from Asia, formed the ancestors of the Aztecs, Toltecs and Incas of Mexico and Peru in pre-Hispanic days. Vitus Behring had doubled the farthest eastern point of Asia

in the service of the Russian Government in 1728; and then it was that he crossed to the frigid coasts of Alaska, in 1740.

Up to this period nothing had been known of the inland sea of San Francisco and its singular entrance; that cleft in the coast range now termed the Golden Gate—always supposing that Drake had not entered it. But in 1772 an expedition set out from Monterey with a *comandante* and a *padre*, journeyed along the Californian foothills and skirted the shore of the bay where the city of Oakland now stands, and saw the estuary of the San Joaquin and Sacramento rivers, and beheld the snowy range, which they named the Sierra Nevada. A few days after this they perceived the opening of the Golden Gate and its sea-horizon beyond, backed by the Farallones—thus first discovering and recording it. Two years later another expedition, also with a *comandante* and a priest, ascended the rocky headlands which overhang the gate and planted a cross upon their virgin crags, blessed the place, and had view of the pinnacled islets of the Farallons, which, far to seaward, the traveller of to-day may behold from San Francisco's environs.

But the real conquest of the Golden Gate was yet to come: the passage of its virgin waters by a European prow. A little later sea-expeditions were dispatched by the indefatigable viceroys of New Spain to found missions and Presidios upon that rocky coast and inland bays; especially the energetic Bucareli of Viceregal Mexico, seconded by the willing efforts of the *comandantes* and the priests. The splendid pine-covered headland—Point Pinos—and the pinnacled Farallones were the landmarks to the elusive and mysterious fog-bound Gate of California, which only the rays of the setting sun and the navigating sea-lions had penetrated yet: the gate which was to be the outlet to an empire, to which all the wealth of California should gravitate by natural laws. But now the hour and the vessel had arrived to penetrate this unravished entrance, which nature had so jealously guarded from Drake, "the master-thief of the unknown world," to yield herself up to the insinuations of the (doubtless!) austere and ascetic *padres* of the Church. The day was the 27th of July, 1775, when the *San Carlos* sailed from Monterey; and at the termination of the *Novena*, the nine-

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days' oration celebrated by the officiating padre, the port was sighted. The vessel's launch, which had been fashioned by the carpenters earlier from a single redwood log, was dispatched to reconnoitre the cliff-bound channel of the Golden Gate. As it did not return, the vessel herself, deeming it prudent and aided by the strong flood current setting inwards at the time, and lighted by the last rays of the setting sun, which were borne over the great Pacific bosom, and the silver gleam of the rising moon, the *San Carlos* herself passed through the Golden Gate and dropped anchor in the bay.¹ Thus this great and famous harbour of the North Pacific Ocean was first given to the knowledge and use of man.

And now Great Britain enters on the scene once more upon this mighty littoral. Henry Hudson had perished in the great northern inland sea which perpetuates his name, a century before, and other brave lives had gone in the search for the hoped-for North-west Passage. Yet it was known that a great open sea existed far to the north-west of Hudson's Bay, approachable via Behring Strait; for Samuel Hearn, an emissary of the Hudson's Bay Fur Company, had explored the northern wilderness for a thousand miles to where the Coppermine River debouched into some sea of the north. The work of the great Drake was to be continued, and the famous Captain Cook sails in upon the scene—Cook, the discoverer of New Zealand, the explorer of the Australian shore. "Explore the coast and waters of New Albion," were the instructions issued to Captain Cook by the British Admiralty, "northwards to 65°, and seek to find a passage from Behring's Strait into the Atlantic." Cook sailed in July 1776; spent a year and a half in the South Pacific, sailed north and west, and discovered the Sandwich Islands, January 1778, and two months later reached the American coast upon the 44th parallel. Going still northward he looked for the supposed inlet-passage by which it had been said an Italian navigator, Juan de Fuca, had reached the Atlantic, found it not, but in latitude 49° entered a harbour now called Nootka Sound, on the coast of

¹ For details of these matters, see *The Discovery of San Francisco Bay*. Professor Davidson: San Francisco, California.

INDIANS OF VANCOUVER ISLAND, BRITISH COLUMBIA, AT THE PRESENT TIME.

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Vancouver Island. To Mount Edgecumbe and Mount Saint Elias he applied those respective names—the latter the great snowy peak more than eighteen thousand feet altitude upon the borders of the Alaska and Yukon of to-day, whose gleaming crest forms so notable a landmark from the sea. Onwards still went Cook, towards the frozen north, searching ever for a passage; and at last, sailing through Behring Strait, he reached “the north-westernmost extremity of all America” and named it “Cape Prince of Wales,”—August 9, 1778. Immediately opposite this headland he found another cape. It was the north-easternmost point of Asia; that striking and interesting geographical condition in which the ancient continent—cradle of the human race—approaches the shores of the New World: latitude 66° N.

So the genius of Britain completed what the genius of Spain had begun, for the work of Cook was corollary, 265 years afterwards, to the work of Magellan and Balboa.

Nevertheless, Spain claimed the whole of this vast coast, by right of Balboa's first entrance and the subsequent Papal “authority.” But the sojourn of Cook at Nootka had given rise to an unexpected development—a development brought about to some extent, moreover, by an insignificant animal: the sea-otter. Canoe-loads of Indians had crowded about Cook's ships with the sea-otters' skins for barter; and when the expedition on its homeward voyage reached Canton in China, these skins were found to be of great value—a skin which had cost sixpence, perhaps, selling for a hundred dollars. The possibility of fur-trading following upon this created great interest in England and elsewhere, and ships and traders of all the maritime peoples of Europe and of the United States began to frequent the north-west coast. Spain viewed these proceedings with alarm. Were not these still her own sacred waters? Action was necessary: an expedition to Nootka followed, difficulties and preparations for war between Britain and Spain ensued; but by the Nootka Convention of November 1790 British rights were admitted, and Spain lost the sovereignty of the region.

But for the following quarter of a century the hands of Britain were full with European affairs, and the hardy and enterprising traders and whalers of New England—among

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them Ledyard—journeying via the stormy Horn, made of this far-off region of the Great Pacific Coast a United States field of almost exclusive character. To an American trader—Captain Gray—moreover, was the credit of discovering the great Columbia River; that mighty stream which falls into the Pacific Ocean in latitude $46^{\circ} 10'$, after traversing British Columbia and Washington.

The discovery of the mouth of the Columbia was attended, although to a less extent, by the same elusive circumstances as that of the Golden Gate. The bay at its mouth was discovered by the Spaniards in 1775 by Heceta, who imagined a river must debouch there; whilst a few years afterwards the English trader, Lieutenant Meares, sailed along outside the bar and called the place Deception Bay; but he denied the existence of a river such as Spanish charts had said to exist. In 1778 Captain Cook passed the bay, but even he failed to see the river's mouth; whilst yet another famous British captain—George Vancouver—whose name remains so prominently upon that coast to-day, only noted the appearance of a small inlet, as he described it; and he continued his voyage to Pugel Sound. Two weeks later, on May 11, 1792, he heard of Gray's discovery; and the American named the river after the good ship *Columbia* in which he entered it. This was the first ship which, two years previously, had ever carried the Stars and Stripes around the world, on Gray's voyage from Boston to China.

Thus we have seen how, step by step, the line and features of the Great Pacific Coast unrolled to the hardy voyagers of the various nations whose natural impulses took them thither. From the extremity of North America and Asia, in the frozen Arctic, to the extremity of South America at Cape Horn, twelve thousand miles of surf-beat shore, the contour of this great coast lay at the map-maker's will. Still, however, the dream remained of the North-west Passage: some open route of "silent highway" which should give access from the Atlantic to the Pacific, whose entrance, hidden perchance by some peaked promontory, should yet yield up its secret. The "secret of the strait" had now transferred itself to the secret of the passage.

But we must follow for the moment the great pioneers of

the Anglo-Saxon West; beginning their struggles with nature, with Indians, floods and mountains in the early years of the nineteenth century. The French, Spanish, American and British spheres of influence on both sides of the vast Mississippi became changed and defined, and civilization gradually took its westward way. The land highway to the Pacific from the Missouri, across the approaching headwaters of the Missouri (which, as the Mississippi, falls into the Mexican Gulf) and the Columbia (falling into the Pacific), was accomplished by the famous Lewis and Clark expedition sent out in 1803 by the wise and kindly Jefferson, president of the growing young giant of the United States. The famous fur-trading companies and their rival territories, the Oregon question and the boundary definitions, the great westward migration, the gold discovery of California are all great matters which have affected and decided the march of civilization on the Great Pacific Coast, mainly in the nineteenth century.

The instructions issued by the United States President Jefferson embodied an absolute path-finding mission to the Pacific Coast "to explore the Missouri River and such principal streams of it as, by its course and communication with the waters of the Pacific Ocean, whether the Columbia, Oregon, Colorado, or some other river, may offer the most direct and practical water communication across the continent for the purposes of commerce." So wrote Jefferson in his mandate to Lewis and Clark. He added instructions to the effect that they were to err on the side of safety for themselves, rather than in temerity of exploration, showing his kindly thought for the explorers. Just prior to leaving St. Louis the leader of the expedition happened to witness the lowering of the French flag in upper Louisiana and the hoisting in its place of the Stars and Stripes; and then they began their toilsome up-stream voyage against the swift Missouri River, passing the last white man's settlement—the home of the famous Daniel Boone. On the way they encountered British and French traders; and buffaloes, Indians and grizzly bears were companions of their journeyings. Onwards they pressed towards the source of the giant Missouri, through a wild, unexplored region; going far to the

northward along its fluvial highway. Overturned boats, dangerous rapids, fatigue and privation were but diurnal incidents of their long and interesting journey; and at length, in August 1805, Captain Clark, with a portion of his company, ascended the summit of the Rocky Mountains to the very *divortia aquarum* of the continent, where the foot of the white man had never trod before. Inspired by the belief that he was looking over upon the watershed of the Pacific Ocean—although 800 or 1,000 miles away from its shores—the leader crossed the summit on the same day, and descending the slopes for a space encountered a fine stream. This stream was flowing *to the west!* It was the headwaters of one of the affluents of the great Columbia River, that magnificent fluvial artery of the Pacific north-west, which rising in the Rocky Mountains debouches in the Pacific Ocean after traversing British Columbia, Washington and Oregon. After great difficulties and privations the expedition reached the navigable headwaters of this affluent—the Snake River—over rocks, fallen trees, through dense forests, torrential, icy streams, storms of snow and sleet, alternating with heat and fever—such elements as Nature ever prepares for the pioneer-intruders in her untrodden labyrinths. Building five canoes they descended the river, passed the now famous Dalles, and the narrows and cascades of the great salmon-bearing river, and on the 7th of November reached their desired haven. There upon their ears fell the roar of the mighty western sea; there before their eyes were the blue waves and surf-beat verge of the Great Pacific Coast. Thus was a highway first opened to the west by these intrepid young Americans.

The dawning of the great nineteenth century was pregnant with other matters of grave portent for the Great Pacific Coast. The dominion of Spain over her colonies was shaking to its core, and the birth of new nations was heralded. The long pageant of viceroy, priest and governor was drawing to its close, unrolled for three hundred years upon the shores of Mexico and Peru. The civilization of Spain had penetrated those thousands of miles of savage forest and snow-crowned Cordilleras: beautiful cities and capitals—chapters in stone from the mother country—had arisen; a

VIEW ON THE UPPER PART OF THE COLUMBIA RIVER AT REVELSTOCK, BRITISH COLUMBIA

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great social and ecclesiastical system had grown to being; myriads of mines of gold and silver had vomited their wealth down from the Andes to the plate-ships, and myriad Indians had given up their wretched lives to enrich the callous monarchy and moribund nation of their taskmasters. The seal of Spain, full of beauty, full of cruelty, pregnant with possibilities, sown with disorders, had been indelibly stamped upon the peoples of that mighty littoral for full eight thousand miles—a civilization which may hold much yet unsuspected for the New World. And now the voice of Bolivar was heard, and other heroes too; and the thoughts of French philosophers, the influence of French revolution and the machinations of French Napoleon threw their shadows and effects into the New World. Caracas, Chile, Buenos Ayres, Peru, Mexico, all threw off the mastery of Spain, and were launched on their own keels to perturb the world with fifty years and more of bloody revolution—working out, nevertheless, their own destinies in nature's ordained and mysterious way.

Whilst these weighty matters were pending in the Spanish-American world, both north and south of Panama, the more backward, but more vigorous civilization of the Anglo-Saxon was beginning to take root upon the North Pacific Coast. In 1818 the finding of a North-west Passage became again a British national object, and Lieutenant Franklin—of immortal name—voyaged in Hudson Bay in command of an expedition to traverse Prince Rupert's Land to the Arctic Sea. The Arctic Coast of America at that time was only known at the mouth of the Coppermine River, discovered by Hearne, and the mouth of the Mackenzie River; and Franklin surveyed a portion of the coast. A second expedition in 1825 was also successful, and on his return home Franklin was knighted, and other honours were awarded him. In 1845 the Admiralty offered him the command of an expedition to discover the North-west Passage. He accepted, and with a picked crew, partly from the numerous volunteers who had come forward, he set sail in the *Erebus* and the *Terror*, May 1845, with three years' provisions. Alas, poor Franklin! for from that day, save that the ships were sighted in July by a whaler in Baffin's Bay, the vessels were never seen again.

Whilst at first anxiety was not felt for the gallant explorer and his companions, for enthusiastic letters found their way home, an expedition was, nevertheless, dispatched in 1847 to relieve Franklin. It was unsuccessful. Then the alarm became general; expedition after expedition—fifteen of them between 1848 and 1854—was dispatched, whether from England or America, upon the track of the vanished ships. Yet still the frozen North retained its secret, no definite tidings were obtained, and the efforts of the British Admiralty came to an end. But what official effort did not accomplish the love of a wife was able to consummate. Who can read the story of Lady Franklin—even in the twentieth century—without a tear in his eye and a swelling of his heart? Exhausting all her available funds this devoted and pious woman—her husband's disappearance had aroused the pity and interest of the whole civilized world—sent out further expeditions to the frozen North in search of Franklin; and traces of the explorer's journey were found—skeletons and articles of property,—and the stories of the Eskimos pointed to some terrible disaster. These tidings were brought back to the heartbroken lady: there could be no hope. Yet one final effort then she made to wrest from those Arctic snows the secret at least of the final resting-place of her husband. Giving all her available means thereto, the *Fox*, a household name in Arctic history now, was purchased and its command accepted by Captain, afterwards Sir Leopold, M'Clintock, and the vessel sailed for the North-west Passage. From this expedition the truth was learned: the trail of ships' articles, broken boats, and skeletons all along the coast of King William Island told a tragic tale which the stories of the Eskimos bore out, and all was corroborated by the discovery of a ship's chart in a cairn, upon which some inscription set forth that the ships had been abandoned, that disaster had befallen the expedition—hunger, suffering, cold, loss, and that Sir John Franklin had perished on June 11, 1847. Furthermore, it stated that the survivors planned to make their way back, but the rescuers, following on the indicated route, found only empty boats and whitened skeletons to tell the tale; and the resting-place of Franklin and the whereabouts of the *Erebus* and the *Terror* were unsolved mysteries.

As to the North-west Passage the honour of the beginning of its discovery is given to Franklin, for his voyage was in the right direction, and only an error at the last led to its failure and his destruction. The first to pass through the Passage, although partly sailing only and partly on foot along its icy shores, was McLure, with the *Investigator*; but it was the work of M'Clintock with the *Fox* which paved the way. Other intrepid souls there were, famous in the history of the Arctic—Parry, Ross, Rae, Young, and more adventurers still, all seeking to navigate that northern strait which, conceived by the Elizabethan voyagers as a great trade route from the Atlantic to the Pacific, became from natural circumstance of scientific interest only as time went on. Now the navigation of this elusive highway has been accomplished, but only now—yesterday—as in its place we shall see.¹

Upon the map and history of the great north-west region no names are so prominent as those of the series of intrepid and enterprising Scotchmen, who pushed their way and brought civilization on to the Arctic and Pacific coasts, from the middle of the eighteenth to the middle of the nineteenth century. The rivalry for the Columbia River fur-trade and all the huge region of which it was the centre was keen. Two powerful British companies were operating: the Hudson's Bay and the North-west Fur companies, and one of their officers, Alexander Mackenzie, had opened a way for trade by his discovery and exploration of the Mackenzie River in 1789 to the Arctic Ocean, and to the Pacific by crossing the Rocky Mountains from the head of the Peace River in 1793. Surmounting appalling difficulties Mackenzie arrived at what he thought was the Columbia River, but which was in reality the Fraser River—so-named afterwards; the great stream which, traversing British Columbia southwardly, empties into the Pacific at Vancouver.

But the establishing of Astoria by the American trader Astor at the mouth of the Columbia—a most enterprising expedition this was—gave the Americans a strong foothold in those regions, which was, however, disputed by the British, and Astoria was sold to the North-west Company in 1813; the British flag taking the place of the American.

¹ See p. 44.

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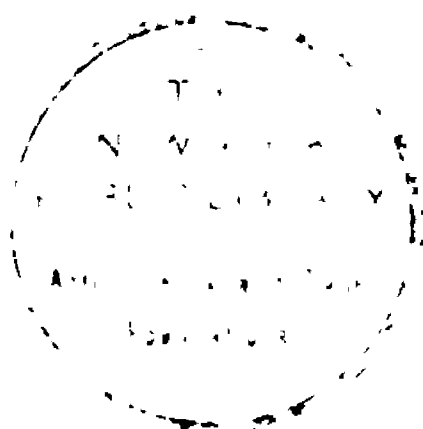
A fusion of the two great British companies soon afterwards caused rivalry between them to cease; and Fort Vancouver was established in 1825 under the "Father of Oregon," as the pioneers termed Dr. McLoughlin, the kindly and famous British manager. From this point the fur-trade of the region was dominated entirely, until the "Oregon question" arose, a long, desultory, although at times bitter question, which took twenty-nine years to settle. The Americans claimed the Columbia Valley by right of its discovery by Gray; but a joint occupation of the territory was entered into by the two countries, under which traders of both nations had equal rights.

Yet the Americans gave little heed to this vast territory, for their part, and the American Congress at Washington continually defeated movements to establish official governments and colonies there. One American orator declared that "Nature has fixed the limits for our nation; a western boundary of inaccessible mountains (the Rockies) whose base she has skirted with irreclaimable deserts of sand"; and only a few idealists looked upon the huge region of the Pacific slope as of any value to the United States at that time. It was in 1817, indeed, that Bryant wrote of those—

"Continuous woods where rolls the Oregon,
And hears no sound save his own dashings."

The Oregon was the poetical name for the Columbia River, taken from a book by Carver, a famous pioneer, and it became popular. At length further diplomatic negotiations arose between Britain and the United States, the former demanding the Columbia River as a boundary and insisting on her right to the country west and north thereof; denying the American right to the whole river by reason of Gray's discovery of its mouth, and the Lewis-Clark expedition, and putting forward with acknowledged justice the explorations of Cook and Vancouver, and the fact that her subjects had spent vast sums of money in the development of trade in the region. Even years afterwards, in the Ashburton treaty of 1842, when other questions between Britain and the United States were settled, the Oregon boundary remained undefined, and the Americans of Oregon were bitterly disappointed at their Government's inaction. The evils of slavery were

HARRISON LAKE, BRITISH COLUMBIA, NEAR THE INTERNATIONAL BOUNDARY.



beginning to be felt in the United States. At this period the "Great Migration" began : adventurous spirits were urged on by the tales of pioneers, and the majestic mountains, boundless plains, rushing rivers and mighty cañons formed their promised land, and a new world opened to the Americans of the eastern states, in the regions of the great unopened west.

The first American Government to be established on the Pacific was in the huge territory of Oregon in 1844, where a Provisional Government by compact among the pioneers was drawn up, following on the settlement of the country after the "Great Migration" in the previous years. Nothing is so sensational, perhaps, in the movement of a people as this setting out towards the west at that period in the history of the American people dwelling east of the Rocky Mountains. The entire populations of towns, seized with "Oregon fever," organized themselves into great caravans and trekked towards the Pacific slope and the great Santa Fé and Oregon trails. And the stories of privation, Indian attacks, heroism, villany, murder, enterprise and every other quality and incident of emigrating man and adventurous travel form the theme of a romantic history which is a notable phase in the life of America. Oregon then was the great Mecca; California was almost unknown and unconsidered, except for a few Spanish missions and the gentle civilization they established under the rule of Spanish-Mexico, which had come, not from the east, but up the Great Pacific Coast.

The Oregon question now grew acute. A convention was held at Cincinnati, in which the entire country was interested, for the Great Migration had attracted much attention and the desire for establishing American rights west of the Rocky Mountains. The result was that the Americans, who had formerly claimed up to the 49th parallel, advanced their claims to include the territory up to latitude $54^{\circ} 40'$. This exorbitant and unfair demand gave rise to the singular bombastic "war-cry" which accompanied the election of President Polk in 1844, of "Fifty-four forty or fight," in which it was urged to make war with Great Britain if that boundary were not acceded to. Britain, however, took no heed of the demand, although it must be stated in justice

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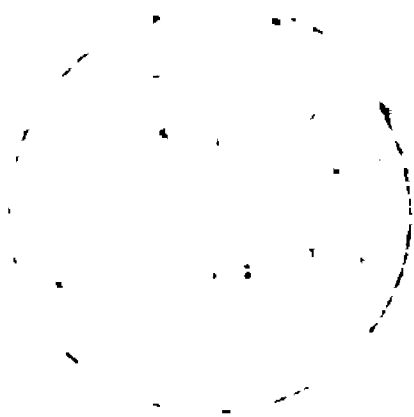
to the Americans that it was unfortunate that she had so long refused to adjudicate on the basis of the 49th parallel, which the United States had offered. The next president, however—Calhoun—desirous of avoiding war, which might seriously have threatened, opened negotiations again, and on the 15th of June, 1846, the question was settled with the 49th parallel as the boundary, and the treaty signed, and British Columbia to-day extends southwards to that parallel.

The difficulties of the people of Oregon, however, were not over. Their Provisional Government had embodied as part of their tenets that no slavery should be permitted in the territory—it was repugnant to the people of the Pacific slope; but Congress, with its slavery-favouring president Calhoun, withheld official territorial rights and government from Oregon on this account. Moreover, the massacre of their chief public man by the Indians, and the Indian war following, involved the Oregonians in deep difficulties and expense; yet still the United States—who had been willing to go to war with Great Britain over a question of boundary—failed in their national duty to their far-off kinsmen, left them defenceless and without resource; their only means of resource being the British Hudson Bay Company, who supplied them with loans of goods. It was the last straw. A memorial was indited by the Oregonians: "We despair of your protection. Indian tomahawks are red with our blood. We have a right to your aid, and you are in justice bound to extend it. We are struggling with all the ills of a weak and temporary Government; and with the coming of next summer sun we expect your laws and your arms." Such was the burden of the message which valiant pioneers carried eastwards from the Pacific Coast to Congress at Washington; and only then did Oregon secure at last a proper territorial government, in March 1849.

This date, 1849, is almost a world-famous one—the "days of gold" were ushered in, and the westward star of Oregon paled before the meteoric luminary of California: a land which hitherto had been almost unconsidered, as we have seen. South of latitude 42° N., the present northerly boundary of California, all was the Spanish land of New Spain. But in 1821 Mexico became independent and the region



THIS HARBOUR OF PRINCE RUPERT, BRITISH COLUMBIA, NEAR THE BORDER OF ALASKA,
ONE OF THE WORLD'S FUTURE SEAPORTS.



of California was hers. Some emigration from Oregon had taken place, however, and after the question between Texas and Mexico in 1836, the menace of war between the Anglo-American Republic of the United States and the Spanish-American Republic of Mexico ever existed, which some day was destined to be wiped out in blood. Errors on both sides and the question of slavery, which Mexico forbade and the Texans and the Americans upheld, influenced the rupture at length, and, as a result, California was lost to Mexico, as well as the other enormous territories—Texas, New Mexico and other areas—in 1848, just before the discovery of gold in California. The loss of this territory was bitterly resented by the Mexicans; and it is to be recollected that under Iturbide (1821) the Empire of Mexico was the third largest in the world, coming after the Russian and Chinese Empire in point of size.

We have seen that Spanish and British influences have been those which have dictated the possession and civilization of these vast territories of the Great Pacific Coast. Yet there was another people engaged in planting the seeds of their own system—religious and social—in the north-west Pacific region. Russia held Alaska, the huge Asia-fronting province verging on the Arctic Circle, by right of Behring's discoveries, and the Greek Church and Russian nomenclature still form salient features of Alaskan towns. But Russia had little ambition to be an American power; and in 1867 she sold Alaska to the United States for one and a half millions sterling, and by so relinquishing her sphere upon that continent earned the regard of the United States. The Behring Sea question which arose between the United States and Great Britain and Canada was a source of irritation and danger for many years, but it was settled by arbitration, in Paris, 1893; the exclusive rights in Behring Sea which had been put forward by the United States being disallowed, as also the monopoly of the fur seal fishing. After this there remained the matter of the boundary between Canada and Alaska to be settled, and this was definitely concluded in 1903, by a joint commission.

Thus the tale of the geographical discovery, distribution and possession of the vast littoral of the Great Pacific Coast

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has drawn to its close. Yet stay! there is one item still. Balboa first saw the Pacific in 1513; Magellan rounded the southern end of South America in 1521; Behring and Cook explored its northernmost points in 1740 and 1778; Franklin and others navigated the Arctic in the nineteenth century. But by whom, and when, was this monstrous island of the two Americas to be circumnavigated at the north? We heard the answer in 1908, at the Royal Geographical Society, when a brave Norwegian sailor—Roald Amundsen—and a few companions came back from their journey in a small fishing-boat, having completed “the most interesting voyage there remained to be achieved on this earth.”¹ Starting in 1903 from the Atlantic side, they had navigated the Northwest Passage in the little *Gjoa*, sailing westward and emerging into the ocean which washes the Great Pacific Coast. Thus, only yesterday, was the circumnavigation of America completed. In September 1909 the world was startled by the reported discovery of the North Pole by the American explorer, Dr. Cook, who claimed to have arrived thereon earlier in the previous year, and a few days afterwards by that of another American explorer, Commander Peary.

Thus we have informed ourselves, good reader, as wise travellers ever do, of the outline of the history of the region we are going to visit—these sunset-lands where roll twelve thousand miles of ocean surge against the Pacific shores.

¹ *Royal Geographical Journal.*

III

CENTRAL AMERICA : THE LAND OF THE ISTHMUS

IF there is one piece of land in the New World, or indeed upon the Globe, which, from its singular structure, forms a centre of topographical interest, that piece of land is the Isthmus of Panama. The Great Pacific Coast is being called upon to yield up its impenetrable continuity. The "secret of the strait," so long dreamed of by voyaging explorers, is finally to be solved; the passage from sea to sea, which nature made æons ago and closed up again in the Tertiary ages before man appeared, is to be opened once more. For man has left his Quaternary caves and savage yesterday, and now, having a mind to pass great war-canoes and mighty rafts of merchandise from one side of America to another, has marshalled an army of human workers—and is cutting through the low backbone of the Andes here to make the Panama Canal.

Cogitating thus, I turned aside to view a heap of rusting engines amid riotous vegetation and iron wrack—a corner of the remains of the De Lesseps' *régime* which had remained untouched by the American engineers; and I observed part of an ancient railway track, whose rusty rails ended in a mosquito-haunted swamp. Whilst I looked at it it seemed to move, or be alive, and I saw a thick stream of tropical ants walking along the rails, to disappear among the vegetation. An hour afterwards I beheld the stream of human ants in the famous Culebra Cut, and the mighty earth-moving engines they manœuvred—splendid human ants of Anglo-Saxon race, undaunted before the rocky ribs and dismal swamps upon their line of route.

As I stood upon the shore of the surf-fringed bay of Colon and watched where, beyond its horse-shoe curve and palm-clad promontory, the steamer I had left lay anchored, it came

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upon me with sudden force that this was indeed the limit of the Atlantic world. And when I had passed over the fifty miles of railway through those tangled woods and fevered swamps and reached the blue Pacific Sea and the verdant isles of Panama, it seemed to be the threshold—as indeed it is—of a vast new untrammelled world. There was nothing new or original in the thought, but perhaps the beating of surf upon long desolate shores has some peculiar voice of nature in telling of continents beyond. There, somewhere, was that “peak in Darien” where Balboa, nearly four hundred years ago, first saw the sunset in the Pacific, and here must have passed his trail of Indians, bearing ships’ timbers under the lash. Here also hurried those enterprising buccaneers from Britain or Amsterdam, who were in too great a hurry to go round Cape Horn or through Magellan’s Straits, hot on some predatory cruise adown this Great Pacific Coast, having built or stolen a ship at Panama. But all that belongs to the past; it is with the living present that we are now concerned.

The Panama Canal, according to the Hay-Pauncefote Treaty made between Great Britain and the United States in 1901, is to be open to the vessels of all nations on equal terms, whether in times of peace or war, whether to ships of commerce or of war, an arrangement for which the world has to thank Britain in the main, for she gave up her right for this. The canal, however, is not international in any other sense, as it is to be fortified and defended by the forces of the United States and operated by Americans of that republic alone. This occupation and control is vested in perpetuity in the United States by the republic of Panama, a republic brought to being in 1904; an off-shoot from the republic of Colombia, whose birthright the isthmus was, but lost by pronunciamientos in Panama, ended by machinations emanating from the United States. It was a bitter blow to the Colombians, this deprivation of their valuable topographical heritage, and the United States are by no means free from charges of spoliation which were brought against them.

On the other hand, the Colombians had largely their own folly to thank for its loss: procrastination, lack of enterprise and double-dealing. At the time I first crossed the isthmus,

a little before the independence of the region was brought about, a revolution was in full swing in Colombia, and stories filtered down to Colon of rival generals burying each other alive after a battle! I do not vouch for the truth of this, but Spanish Americans are in the habit of taking vengeance upon their defeated rivals, to this or a greater extent, as I have witnessed myself elsewhere. The contingent of the Colombian army at Panama at that period consisted mainly of negro boys, or semi-negro, some of them of such tender years that they could scarcely hold their heavy carbines on parade, as I saw them. It is to be recollected, however, that the Colombians were sore pressed by internal dissensions and that much of their "food for powder" had been used up, or was engaged elsewhere; that Bogotá, the capital of the country, is far away from Panama, two weeks' journey by steamer, mule and stage, in the heart of the Andes, and that the country was poor. Small wonder, therefore, that the isthmus was lost, with a great power looming up—the United States—on the near horizon. So if we cannot excuse these amenities of the rival generals aforesaid, we can sympathize with Colombia's loss, and also congratulate her on the progress she has made since, as described later on.

The work of the Americans—who, in justice to them it must be recollected had often been grievously humbugged by the Colombians, and who, moreover, did pay the aforesaid Colombians a round sum in gold dollars as compensation or purchase of the zone—began in 1904; and the first work, it was soon evident, was to render the place possible of habitation for the white man by sanitary measures. The most formidable foe was yellow fever, that malady of swift fatality which attacks the stranger and leaves the natives and the negroes immune; and an outbreak of this in April 1905 created a panic which bid fair, at the moment, to scatter the armies of science, doctors, engineers and all, which had assembled to do battle with mosquitoes, swamps, and inanimate rock and earth. Now nature, it would seem, has put the messenger of death by yellow fever and malaria into the possession of a small creature of the animal world—the mosquito. And two varieties of these little fiends (which assuredly did not escape from Pandora's box, for they must

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have arrived in some little hell-case of their own), the *stegomyia* and the *anopheles* respectively, are the medium of propagation of these two diseases. War upon mosquitoes was therefore declared; and in the popular mind, in the United States, arose the picture of grave professors armed with cans of petroleum penetrating the dismal swamps to pour the fiery oil upon the stagnant waters, so to destroy the larvæ. The malaria mosquito breeds in pools of stagnant fresh water where grasses and algæ grow, all across the isthmus, whilst the yellow fever variety prefers the neighbourhood of towns, out of some affinity possibly for the human race! The main preventatives were in proper draining of the sub-soil, protection from the bites of the insects by the free use of wire screens to the doors and windows of the houses, and, in the case of malaria, by the efficient use of quinine: all of which methods were successfully adopted. The city of Panama, as well as Colon, picturesque sinks of Spanish colonial and republican filth, were attacked and invaded by an army of four thousand men of the Sanitation Department; house by house the towns were cleansed and fumigated; pavements, sewers and water-supplies made and provided, and stagnant pools drained away. In my first visit to Colon I beheld houses built on piles over stagnant, evil-smelling pools, but when I returned they had been banished, and the modern science of sanitation enforced by a despotic—yet well-justified—doctor-*régime* had won a great victory such as the three hundred years of Spanish occupation had never attempted. The death-rate decreased rapidly year by year, and in 1907 it had fallen to 29 per thousand, and in 1908 to 13 per thousand, reckoned among the employés of the Canal Commission 44,000 strong; whilst among the employés of white American nationality the death-rate fell to only 3·84 per thousand. Here then is the romance of sanitation and its merciful dispensations brought about by the exigencies of commerce, as represented by the clever and energetic people of the United States. The Canal Commission has recently reported—not facetiously—that the isthmus of Panama now is “one of the healthiest places in the world”!

I shall never forget the appalling types of humanity I saw

along the zone of the canal. Near the little wayside stations at which the train stopped upon the Panama Railway, groups of negro and native huts were seen, board shanties, built on piles over swamps, backed by rank vegetation and bathed in a sultry steam of hot sun and moist earth. But the types of humanity which inhabited them—oh, great Providence! who created man in His image and likeness!—grotesque mixtures of negroes and Chinese, or heaven knows what other nationalities; debauched, horrible; like human bugs lining this crack of the world, of the Panama Isthmus. On the veranda of one of these shanties, as the train passed slowly, a negro rushed out from the windowless interior, dressed only in an ancient short coat—it was an old ragged dinner-jacket, heaven knows where he had obtained it—and danced half-naked upon the boards in savage or drunken abandon. Other scenes of the domestic interior of these dwellings were laid bear to the eye of the passing passenger, such as it would scarcely be possible to describe with these chaste chronicles. I have seen the inhabitants and dwellings of the lowest natives in many wild lands, but is there anything to compare with the “nigger-shanty” of the semi-civilized negro, relapsed to barbarism in tropical America? Even these are the prints of the sin of slavery with which the descendants of the Pilgrim Fathers and their European brethren defiled the shores of the New World when they tore the wretched negro from his native Africa.

Far be it from us, however, to despise the negro as a race. If the Panama Canal is ever completed—and who need doubt it?—it will be due to the work, in great part, as far as manual labour is concerned, of the West Indian negroes, for these are employed in great numbers; and now that their proper maintenance as regards food and sanitation is insisted upon, they are found to be much more efficient than under the preceding French *régime*. At first it was found that they suffered from a lack of vitality, and it became evident that this was due to their slovenly and insufficient methods of living. Proper cooked food was then provided for them and its cost deducted from their pay, with a result of greatly increased labour capacity and better health. Not a very remarkable discovery, you will say, kind reader, that the

belly of the unfortunate nigger must be filled if he is to work ! The number of these useful people employed is about twenty-five thousand, and they receive 50 cents, equal to 2s. 1d. per day, clear of the cost of food and quarters.

There is one pleasing feature about these people—pleasing, at least, to the British traveller. The negroes retain a strong affection for their own homes in the West Indies, and for their British citizenship; and they will not settle on the isthmus, but return to the islands of Jamaica, Barbadoes, or others, whither they came. One day, in Panama I think it was, a burly negro approached me—possibly he had seen me before about the hotel courtyard—and extending his hand respectfully for a shake, said, “I am an Englishman as well; I live in Jamaica; please shake hands.” Needless to say, I did so, congratulating him at the same time upon belonging to the freest and greatest people of the world ! I do not mean by the expression of this sentiment to be bombastic, nor to draw any unkind comparison with the Americans of the United States—our much esteemed “cousins” who love to arrogate to themselves that same title of leading civilization. It requires few arguments to show that the title is not theirs yet. They neither deserve nor could maintain it at present; when they can, and if they do, no one will grudge them their use of it. And this reminds me of an incident on board one of the Pacific Coast steamers on which I journeyed. The captain’s nationality, as he himself had stated, was a matter of doubt; whether of American or British origin, for he was born in Canada of American parents and was a nationalized inhabitant of Chile. At the dinner-table—it happened to be the 4th of July—the solitary Englishman was seated on one side of the captain and three Americans on the other; and the conversation turned upon matters of national supremacy. The Americans—one was an unaggressive botanist, another a haughty commercial traveller, and a third a stout Tammany politician going down to Peru to get a concession (good fellows all, withal)—naturally blew their country’s trumpet resonantly, and the glories of American civilization and power reached a lofty pinnacle: glories flaunted purposely in the face of the solitary and reserved British Lion whose tail it was hoped thus to twist. The Lion awoke gently. “Gentle-

men," he said, "it isn't necessary to stick up for the superiority of Britain; it is such a palpable fact that Englishmen don't do it; it doesn't really require stating, don't you know!" There seemed to be some logic about this which was incontrovertible, and no one disputed it. The Lion added that he had been looking about all over the ship before dinner for an American (the Americans had just come on board) to open a bottle of champagne in honour of the Fourth, but had not been able to find one. Now he hoped to have the pleasure. But the "proposition" struck the Tammany politician so forcibly that he took upon himself to order and pay for the champagne in the act, and fraternity reigned supreme.

Returning for a moment to the negro, there is a remarkable difference between the black peoples who live under British and the American *régime*, a fact common to the notice of the traveller. In Jamaica, Barbadoes, or others of the British West Indies we find a happy, contented, relatively simple-minded black population, amongst which the white man and white woman go openly and are respected and even loved. In the United States the very reverse is the case. The negro, in the northern states at least, is generally inclined to be insolent and objectionable, and is correspondingly repressed by the white American, and hated as a being of inferior race and an upstart; whilst in many districts of the south and south-west white women go in fear where negroes are; and race-hatred, fighting, lynchings and burnings are of common occurrence, and scarcely excite notice in the American daily papers. What is the reason? The answer embodies the difference between the British and the American people. The one being of a governing and "imperial" character; the other non-imperial and parochial. The negro and the white man can live contentedly side by side in an empire, but not in a republic, and this admits of very palpable explanation. But the matter of the negro in the United States is one which cannot be lightly dismissed; it is a terrible problem for the Americans: a terrible legacy resulting from the outrage perpetrated upon Nature in tearing the black race from the continent where Nature had brought them into being. Will Nature some day forgive man for this outrage? Shall some resolution of the problem work itself out among the coloured

inhabitants of the United States? In the British Antilles, the beautiful summer isles of Jamaica, Trinidad, or Barbadoes Nature seems to have forgiven the rape which was committed against her to some extent in a happy, harmless negro crowd; but in the United States she is punishing the white man severely for his act. The negro is an inferior being: it is only cant which pretends that he can ever be the equal of the white; he is a child; a development where nature stopped short. What is to be done with him? The Americans to whom the New World was given, and who in their own new liberty made beasts of burden of their kind, must evolve the answer in tears and penitence!

The matter of nationality on the Panama Canal works is not without interest. Among the European labourers—there were six thousand at work last year—were about equal numbers of Spaniards, Italians and Greeks. The Spaniards and Italians were physically superior to the Greeks; the Italians were often impatient and intractable under American control, whilst the Spaniards, chiefly natives of Galicia and Castile, were the superior of all in working capacity and in amenity to discipline; and at present they have almost replaced the other Europeans. The Spaniards, in common with other European labourers, earn thirty shillings per week outside food and lodging, which are provided. They seem to suffer no inconvenience from the climate, even working in the mid-day sun; but they do not settle on the zone, preferring to seek fortune elsewhere with their savings, or to return home. For the white American employés, life and social conditions are well organized, with clubs established under the excellent auspices of the Young Men's Christian Association; libraries, gymnasia, etc., whilst the women and children live without fear of ill-health whatever. Indeed, the whole colony and work, under the capable American administration, is worthy of much praise. If the American administration can keep clear of the fatal "graft," or financial misdealing which reared its sinister head among them not long ago, their work may be morally clean. This remains to be seen, and with American home practice before them, as in New York and San Francisco, as described in another chapter, it is doubtful if this will be altogether possible. The Americans

are now filling all the administrative posts, it is stated, upon the canal zone, having got rid of any Englishmen or other foreigners who held them !

The Panama Canal, it has been decided after twenty-seven years of construction work (including the French *régime*), is to be a lock-canal. This was decided against the Majority-report of the Board of Engineers appointed by the American Executive to study the question, on the advice of other experts; and the tide-level plan (which had also been in principle that of De Lesseps at first) was afterwards modified to the lock-system. An Act of Congress in 1906 authorized a lock-canal, which should rise from sea-level to an elevation of 85 feet; a minimum depth of 41 feet; with three locks at each side, 110 feet wide and 1,000 feet long. The locks are to be in duplicate, so that two vessels may be passed through simultaneously, or in opposite directions. As to the matter of the tides, on the Atlantic side the rise and fall is practically nil; whilst at La Boca, the Panama or Pacific side, the range is 10 feet above and 10 feet below average sea-level: a total of 20 feet. The length of the canal from shore to shore will be 41 miles, with 4 miles of channel dredging at each end, or a total of nearly 50 miles. Of the centre part the famous Culebra and other cuts call for 4 miles of rock excavation through the backbone of the isthmian range. But the great difficulties in the way of the construction of this colossal work are not the rock cuts only: the rivers which have to be controlled *en route*; the flood waters to be repressed and used for locking purposes; the treacherous dam-sites, and the great head of water which must rest thereon—these are other matters being overcome.

But the genius of the Anglo-American, his mighty steam-shovels, his sea of railway lines, his swarming hordes of eager workmen seem as if they shall conquer. Explosion and spoil-trains follow each other ceaselessly, and the work, splendidly organized and carried on, reveals the pride of a nation of engineers in its regimen and result. The American engineers-in-chief have calculated—nay, promised—that the work shall be completed in 1915, and that in that year we may sail through the Panama Canal upon a vessel and behold its stupendous cuttings from the deck. Let us add *Dei*

Gracii; let us reverently add a prayer for the continuance of the spirit which at length may cast mountains into the sea and bid the "everlasting doors" to be lifted up! ¹

The building of the Canal of Panama has opened up interesting questions regarding commerce and shortening of distances, into which it would be beyond the scope of this book to enter at much length. The primary object of the canal is, of course, to shorten distances, and to render possible the unbroken ocean freights across the world: the cheaper transport of wind and wave and steam of the "silent highway" as contrasted with the wheels and steam of the trans-continental railways. Accompanying this peaceful purpose, of course, as far as the United States are concerned, must be added the strategic factor: the swifter passage of warships from their Atlantic to their Pacific coasts, for the canal will eliminate from the map, in this sense, the geography of South America. The distance from New York to Panama by sea will thus be shortened by 8,400 miles; and similarly to any port of Central America, California, British Columbia, etc.; whilst from New York to places south of Panama it will be shortened from 8,400 to about 1,000 miles, or an average of, say, 5,000 miles, for the west coast of South America. Thus the Great Pacific Coast benefits greatly, and the corresponding shortening of steaming distances from Liverpool, Antwerp, etc., for the North and South Pacific Coasts respectively are 6,000 and 2,500 miles. Further interesting changes in the geographical relations as to steaming distance are those which will be brought about between Europe and New York and Asiatic points which I will reproduce here as bearing in an important way upon our study of the Great Pacific Coast.

"From New York to Yokohama, via San Francisco, the reduction is 3,729 miles, bringing the Japanese port 1,805 miles nearer to New York than to Liverpool. From New York to Shanghai the reduction is 1,629 miles, which leaves Liverpool 295 miles nearer to Shanghai. The Panama Canal will not shorten the distance between New York and Hong Kong, Suez being still the shorter route, and even to Manila the reduction via Panama is only 16 miles; moreover, this small

¹ For a technical description of the canal, see the excellent work, *The Panama Canal and its Builders*, by Dr. Vaughan-Cornish.

reduction is by way of San Francisco and Yokohama. The all-American route from New York to Manila via Panama, Honolulu, and Guam is 128 miles longer than that via Suez. As we go farther south in the Pacific, however, the Panama route again is the shorter from New York. Thus the distance to Sydney is shortened by 3,806 miles (via Tahiti), the distance being 2,382 less than that between Liverpool and Sydney via Colombo, Adelaide, and Melbourne. The reduction between New York and Wellington, N.Z., will be 2,542 miles, bringing Wellington 2,759 miles nearer to New York than to Liverpool. The distance between Liverpool and Wellington via the canal is slightly less than that by the Straits of Magellan. There is also a reduction of distance between Liverpool and the northern parts of the Siberian coast. Otherwise the Panama Canal does not shorten distances between European ports and those on the "Oriental" side of the Pacific, the route having been short-circuited by the construction of the Suez Canal."²

The importance of the island of Jamaica, with its great harbour of Kingston, will doubtless be augmented due to its position near the entrance-line of the canal on this vast new world-route of commerce.

At the reading and discussion of a paper upon the canal, at the Royal Geographical Society in November 1908, which I attended, and from which the above extract of distances is taken, some interesting questions arose, and the use, future, and success of the canal were alternately lauded and condemned. As to the cost of this great work the Government of the United States has been authorized to spend 185 million dollars, including the 50 million of the purchase price; but the estimates made since then have been rapidly growing—it is a huge machine whose appetite comes with eating—and now stands at least at 250 million, with a possible 500 million dollars; or, say, 100 million sterling! Thus does Nature take toll of intelligent man who would carve a way through the rocky ribs she raised up in the Eocene, before the dawn of life upon the earth.

Central America, of which the Isthmus of Panama is but

² Dr. Vaughan-Cornish: "The Panama Canal," *Journal of the Royal Geographical Society*, 1909.

the thinnest portion, was, in earlier geological epochs, an archipelago with a number of straits; but in the period mentioned a continuous range arose out of the sea at the time of the birth of the Andes, and absolutely barred the way from sea to sea, going up to ten thousand and twelve thousand feet above sea-level in places. But Nature left some low gaps, as at Panama, Nicaragua and Tehuantepec.

This extremely interesting region of Central America, where the structural topography and the things of the organic world are so marked and varied as never to cease to excite the wonder and appreciation of the traveller, is, speaking geographically, a division between North and South America, beginning with the Isthmus of Tehuantepec in Mexico and extending southwardly to the Isthmus of Panama. The singular formation of this region is apparent upon glancing at the map; a series of narrow isthmuses or necks of land trending south-east to where they hook on to the massive mainland of South America by their attachment of the Panama Isthmus. The extent of the region thus geographically termed Central America from Tehuantepec to Panama is some eight hundred miles, and it is bounded on the east by the Atlantic waters of the Caribbean Sea, and on the west it forms part of the Great Pacific Coast. The physiographical lines of the country appear to associate it with the Antilles, and its irregular mountain and plateau character, studded with numerous volcanoes, attests the igneous formation of the region. The soil is, throughout the greater area from Costa Rica to Guatemala, of volcanic origin, and exceedingly fertile from this reason. The explosive character of the eruption from these Central American volcanoes has scattered scoriæ and ashes to considerable distances, and the decomposition of these has formed thick deposits of fertile soil. Thus the chemical constituents of the earth's raging interior have transmigrated into the component elements of the finest bananas and coffee which have pleased the world. Throughout this region volcanoes and craters may be enumerated by the hundred; they give a mountainous structure to the land of high plateaux, whilst the same subterraneous forces have built up or thrust up the barriers which now close the old straits of this former archipelago to passage from the

Atlantic to the Pacific. Well might the old conquistadores and all those who searched so perseveringly for the "secret of the strait" have gone home declaring that there was a strait somewhere, but that nature had so thickly studded the place with islands and promontories that it was concealed. Had they arrived in earlier geological epochs they might have found one!

The volcanoes of this part of the earth's surface, from the great Popocatepetl of Mexico (which was smoking when Cortes passed it, but is quiescent now), southward to Turrialba, active and angry, in Costa Rica, show the immense potency of these underground activities at this joint in the earth's harness, which filled up the interoceanic waterways of long ago. Guatemala and other parts of Central America possess more volcanoes than any other country in the world; and their capital cities have been overwhelmed and destroyed thereby on frequent occasions.

The rivers of Central America on the Pacific side are generally small, as the line of greater elevation, the *divortia aquarum* formed by the Cordillera, is, as ever in Andine countries, nearest to the Pacific. On the Atlantic side the rivers are larger, the largest of all being the Usumacinta, more than six hundred miles from its source in Guatemala to its mouth in Tabasco, in Mexican territory. The climate of Central America is governed by the topography, with three natural zones, the *tierra caliente*, or hot tropical lowlands up to about 2,000 feet elevation, with a mean annual temperature from 80° to 73° F.; the *tierra templada*, or temperate zone, 2,000 to 5,000 feet, 73° to 63° F.; and the *tierra fria*, or cold lands, above 5,000, where frosts occur. The rainfall varies greatly: in British Honduras, on the Atlantic side, reaching 71 inches; 180 in Vera Paz in Central Guatemala; 244 in Greytown on the Atlantic side of Nicaragua; and on the Pacific side 54 inches at San Salvador.

The flora of this American isthmian region is tropical; the forests containing mahogany, cedar, logwood, cocoa palms, mangroves, india-rubber, fibrous plants, orchids and other beautiful flower forms; tropical fruits, especially the banana; whilst as to the fauna it is equally varied, including such animals as the jaguar, the puma, the tapir, manatee,

peccary, ant-eater, monkeys, sloth; vultures and innumerable birds, some of the most gorgeous plumage, and with more than 260 species. Noxious insects are also plentiful; and the malarias and fevers of the lowlands are a scourge to the imported white races.

The indigenous peoples of Central America were the Maya Indians of Yucatan, and other natives, whilst the Aztecs of Mexico have left the evidences of a southward movement. The beautiful ruins left in Palenque and Yucatan in Mexico, at Quirigua and Santa Lucia in Guatemala, Copan, in Honduras, and other points are witnesses to these former civilizations. Pure Indians at the present time are found principally in Guatemala and Yucatan; the populations of the other Central American states being principally the Spanish-American mixed race.

Politically this region is divided into various states or independent republics. As a rule these are known to the outside world principally by their names alone, and also by the habit (which some of them are now growing out of, it is pleasing to record) of borrowing money in England and neglecting to pay it back or meet the interest upon it! In London there is an institution known as the "Corporation of Foreign Bondholders," which could interesting and tortuous tales unfold regarding these far-off eyries of Don Quixote, Castroic bombast, courtesy, double-dealing, high-mindedness in hospitality and baseness in finance, such as the singular and complex peoples of Spanish-American race embody.

From Mexico southwards these beautiful little republics—for dowered they are generally with much beauty of nature in mountain scenery, vegetation and climate, and with beauty architecturally these peoples have fashioned their cities and their capitals and homes—are known by the following names: Guatemala, Honduras, San Salvador, Nicaragua, Costa Rica and Panama—the latter but of recent birth, from a Colombian mother and a Yankee father, as we have seen. The word "Yankee," as I have elsewhere explained, is used not in an offensive sense as the Spanish-Americans use it, but as a distinctive nomenclature. These republics might be sweepingly described, in company with South America, as being

in the great "Mañana" belt, extending from Mexico southwardly to Cape Horn. This great "Mañana" belt of Spanish-America, it is not rash to say, is a great Land of Opportunity of which this century will see the development—Mexico, Colombia, Peru, and all the other sisterhood.

The form of Government in these Spanish-American republics is generally that of a federation of the various states or provinces of which each republic is composed, with a central or supreme administration in the national capital; the states controlling their own local affairs. These have been modelled to some extent upon the system of the United States, and France. The various deputies and senators who represent the provinces are elected by popular vote, although in the majority of cases this voting is far from being free from political manipulation or intimidation. The Supreme Government, or its machinery, is generally divided into three departments—the legislature, consisting of the chambers of senators and deputies known collectively as the *Congress*; the judiciary, of the various courts and judges throughout the country; and the executive, consisting of the president and his cabinet ministers. The plan and details of this civic machinery of self-government is excellently thought out and established, and, in theory, should give a perfection of administration. But at present many of these countries do but furnish instances of the difference between theory and practice in human affairs, and bring to mind the sage Scottish proverb regarding the plans of mice and men! In this connection one notable trait of the Spanish people springs into evidence—that as a community they love to enact splendid law-systems; reserving *individually* the right to contravene them. This marks the main difference between them and—for example—the British, who individually are a law-abiding people but put less theory of perfection into their institutions. In justice, however, to the Spanish-American peoples it must be said that they have been only recently established; and that they are in some cases—especially in Mexico—acquiring real stability. Time works wonders and may turn the defects of the Spanish peoples into virtues with its lapse! Be it as it may, these peoples have some characteristics which are superior to the Anglo-

American civilization of the United States which shares the New World with them. Their refusal or inability to sacrifice their native traits of idealism to the exigencies of sheer commercialism—as expounded by Americans—may be a wise provision of nature; guarding a separate form of civilization in that hemisphere for the world's future conduct of affairs. I have made a close study of the Mexican and Peruvian peoples in my books upon those countries, to which I beg to refer the reader who may be interested to follow the subject more in detail.¹

Central America, or rather the Isthmian region included in the five republics thereof, excluding Panama, has shown during the past few years a certain endeavour towards political consolidation and general advancement. Arbitration treaties and institutions, scientific congresses and other movements have grown to being in those turbulent and fertile regions; and whilst these protestations, accompanied as ever in Spanish-American communities by outbursts of impassioned oratory and classical allusion, are more or less evanescent and explosive, they show that the spirit of progress is far from being absent or non-existent. It is to be recollected that all these five small states—Guatemala, Honduras, Nicaragua, Salvador and Costa Rica, after throwing off the rule of Spain in 1821 (even under Spanish rule they formed one Crown colony, as distinguished from Mexico and Peru), constituted a republic under one administration until 1838, when the federation was dissolved. During the latter half of last century these political entities were often engaged in flying at each others' throats over questions of boundary, privilege, national honour and other matters, alternating with repudiation of foreign debts and other incidents of the national life of Spanish-American communities. Indeed, it was of but recent years that a British warship was forced to take toll of the customs of the chief Nicaraguan port, in settlement of continually repudiated debts. I was in San Francisco at the time, and recollect that the incident caused some heart-burning among the more strenuous of the supporters of the (imaginary attributes, as contrasted with the real principle) of the Monroe Doctrine in California and the

¹ "*Peru*," and "*Mexico*," London, 1908, 1909.

United States generally. Indignation at the British act was expressed; but since that time the rise of "Castroism" and the epoch of necessary "big stick" wielding by the United States have brought the Americans to feel that they cannot be sponsors for the questionable financial acts of these southern neighbours. None will deny that it was—and is—a laudable spirit which would protect the weak nation against the strong, but even in the American hemisphere it is being learned that weakness cannot excuse dishonesty. In June of 1909 it was the turn of American warships to menace Nicaragua with punishment for the ill treatment of American citizens in that country. Moreover, the United States has at times taken to itself to play the *rôle* of bully—whether justifiably or not is not to be judged here. "We must whip Chile!" was the legend inscribed in huge letters on the posters of American newspapers on the occasion of the journey of the Chilean warship—the *Itata*—down the Great Pacific Coast to Iquique a few years ago, as I recollect it. It did not really come to "whipping" Chile, however, and although doubtless it could have been done, Chile would have proved a difficult boy to chastise. I have spoken of the jealous relation between the Chileans and the United States elsewhere; and they constitute a present political factor on the coast.

It is now the dream of the Central American International Bureau (an institution created in September of 1908, and modelled on the International Bureau at Washington), and the new Central American Court of Arbitration, established recently at Cartago, to bring about greater solidarity among the Central American republics. Possibly, also, their aim may tend towards political unification again; and it is to be recollected that the federation of these states, hand in hand with a real development of their resources, might create a new potent nation in America. For, excluding British Honduras—that small foothold of Britain on the Atlantic side which is geographically part of this region—the area of Central America is nearly two hundred and twenty thousand square miles, with a population of some four million people. The present objects of the Bureau, whose centre of operations and headquarters are in the capital city of Guate-

mala, which has this honour by historical priority, may best be gathered from the words of the orators at its inauguration. These serve at the same time to indicate the style of speech and sentiments of the Central American people.

“With what enthusiasm, emotion and hope does Guatemala welcome this institution, arising out of the recent treaties signed at Washington! The people of Guatemala feel that this event, which is, in a sense, complementary to our glorious work of independence (from Spain), will undoubtedly bring about a bright future for the isthmus, and will pursue one ideal for the welfare of all the people of the former union. The drawing together of these by peace and harmony, by identity of aims and aspirations, and the suppression of opinions inspired by interest and greed and their substitution by aspirations advised by justice and reason will—notwithstanding incredulous and mistaken criticism (some rather sarcastic remarks in the American and European press as to the probable durability of this *régime*, I should explain, had been made), will bring about that inevitable law which leads towards the beginning of new nations. The bonds of a common Iberian origin, of legislation, of the beautiful Castilian language, identity of customs, similarity of aims, analogy of aspirations, etc., is due to the creation of this wide-reaching International Bureau.”

New federal compacts were entered into, and the matter terminated with protestations of everlasting peace and brotherhood. It is unfortunate to have to record that a short time afterwards the peace was broken by a revolution in Honduras, and some severe bloodshed ensued, in which other of the states became involved. So acute did the situation become and remain that the presidents of Mexico and the United States then appointed emissaries to inquire into the unrest and abuse of power, with the design of enforcing respect for international law and the tenets of the late high-sounding compacts and conventions of Central America. Probably, however, this miniature “Hague” institution of these five Isthmian republics will be of value to the Central American people, and with the improving years of this century a single republic of Central America may emerge, to

be welcomed of British Bondholders and observers of race-development in the Americans.

Next against the republic of Panama, to the northward, we come to the little republic of Costa Rica, washed on its eastern side by the Atlantic waters of the Caribbean Sea, and on the west by the Pacific Ocean—a strip of land some 250 miles in length and 150 wide, with an area of about 23,000 square miles and a population of some 350,000 souls. This little Spanish-American entity enjoys some distinctions which mark out for it a certain individuality. It has been described as the most flourishing of the Central American States; its inhabitants, descendants of Spaniards from Galicia, are the least mixed with aboriginal strain of any of these communities, and are industrious and prosperous; its scenery is diversified and picturesque; its soil is fertile, and its coffee and bananas have earned a world-wide reputation for their excellence. Costa Rica is Spanish for “Rich Coast,” and the designation is deserved.

The topographical conditions of the country are of marked interest. Less than seventy miles separate the waters of the Pacific and Atlantic Oceans in the narrowest part, and the Sierra Talamanca which traverses the country longitudinally and forms the *divortia aquarum* of the watersheds is depressed near Cartago and gives birth to two streams which flow to the Pacific and Atlantic Oceans respectively. From the summit of its high volcano of Irazu—11,200 feet elevation—whose active fires have perturbed with earthquake ravages from time to time the surrounding region, the eyes of the traveller discerns both the Pacific and the Atlantic waters. The numerous streams and fertile valleys of both littorals form a happy environment to a summer climate. On the Pacific Coast are two large bays, those of Nicoya, with its port of entry of Puntarenas, and the Dulce Gulf; whilst on the Caribbean Sea, Port Limon is the main harbour, and this is connected with the capital, San Jose, by a railway system 115 miles long.

The mountain formation of this part of Central America shows the old granite and igneous rocks, with the later Cretaceous and Tertiary formations rising up subordinate thereto, in obedience to the cordilleran formation. The

climate is generally temperate, without extremes of heat and cold, with, at San Jose, the capital, whose elevation is 3,700 feet, that "perpetual spring" which has generally fallen to the lot of these favoured regions of Spanish America; with a mean annual temperature of 68° F. Tropical forests extend from the coast lowlands up the mountain slopes, yielding native cedar, oak, mahogany and other characteristic timbers of tropical America. Consequent upon the considerable rainfall—140 inches at Port Limon, the profuse vegetation has overlaid the rock strata with deep deposits of rich earth, which brings forth the most exquisite coffee, whilst the banana culture has grown to an extraordinary extent, and takes first place in exports, to the yearly value of one and a half million dollars. Like other countries in the great "Mañana and banana zone," any product from india-rubber to cereals, from tropic to temperate, are obtained, according to the elevation of this or that locality. Costa Rica is a rubber-producing country, and a gold, coffee, chocolate, coal, copper, mercury and pearl producing land—bounties of the vegetable and mineral world only found in such variety in these regions of Spanish America. It is one of those lands where, weary of his wanderings and of the world, the traveller might hope to sojourn till the end of his earthly span in ease and comfort!

Separated from its southern neighbour by the San Juan River and Lake Nicaragua is the republic of that name. Nicaragua is best known in the mind of the European and North American by its possession of an alternative route for a trans-isthmian canal; and, indeed, at one time there were not wanting those who claimed a superior facility for that route over Panama. This republic, politically, has earned for itself some notoriety regarding the Central-American peace, and questions arose with the United States upon matters of international law. Yet the inhabitants as a whole are as law-abiding as their neighbours, and suffer principally from the acts of ambitious politicians. The Arbitration Court was impelled from Corinto, to the port's credit.

The area of Nicaragua is slightly under 50,000 square miles, and its population numbers about 500,000, of which about 40,000 are uncivilized Indians. The great bulk of the

NICARAGUA: ENTRANCE TO CORINTO HARBOUR.

NICARAGUA: A STREET IN THE CITY OF LEON.



population consists of the aborigines, or Indians, with some mulattoes, negroes and mixed races, with but a scanty proportion of people of pure European race. Managua, the capital, on the great lake of the same name, has some 35,000 inhabitants. The chief products are agricultural; coffee taking first rank, whilst bananas, cocoa, sugar, tobacco, are also widely cultivated and exported. Rubber is also collected and exported, and some planting has been done of rubber trees: whilst mahogany, cedar and other valuable timbers are cut and marketed. As to minerals some gold mines are worked. The republic is striving to improve her roads and augment her railways, of which latter 160 miles are national property, in connection with the lake and river steamboats. A treaty of peace and commerce with Great Britain was signified and ratified in 1906.

Salvador is a small fertile country with a history of revolutions and wars; fronting upon the Pacific Coast between its neighbours, Nicaragua and Guatemala, to the south-east and north-west respectively; and, blocked on the north by Honduras, she has no outlet to the Atlantic waters or Caribbean Sea. She is, therefore, the only Central American State which does not enjoy interoceanic communication and outlet through her own territory. The area of 13,000 square miles contain a population of 1,050,000 inhabitants; the frontage on the ocean is 185 miles from its eastern boundary of the Gulf of Fonseca to the Paz River on the west; whilst the width of the country is some 65 miles. Salvador is, in effect, mainly a strip of Andine littoral, for the great Cordillera is at its back, giving it in addition a tableland of 2,000 to 2,300 feet about sea-level. The volcanic belt which is so marked a feature of Guatemala to the north forms part of Salvador. Here is the volcano Izalco, "Central America's Lighthouse," for it is always in activity, its fitful flames lighting up the mariner's course far out at sea. Yet its elevation is only six thousand feet, and it came to being only in 1770—a recent creation like Jorullo in Mexico. Of four other principal volcanoes San Vicente, 7,870 feet altitude, of elegant and regular form attracts the eye, with its sister peaks of similar beauty and sinister portent. Of rivers Salvador has few: the Lempa, rising in Guatemala, crosses the country,

and after a course of 250 miles empties into the Pacific. This river is navigable for ninety miles from its mouth. The principal seaports are Acajutla, the terminus of the railway from the capital, San Salvador, and La Libertad, thirty miles from the capital by road. On the Gulf of Fonseca is La Union, the outlet port for the fertile eastern zone, a position of geographical advantage which, moreover, is upon the route which will be traversed some day by the Pan-American Railroad—the inter-continental dream of the Columbian world. A handsome city is the capital, with some 60,000 inhabitants; the seat of government and the centre of trade. The people of this little land of much natural resource live principally by agriculture; for its varied flora and products of the three natural Andine zones of coast, temperate lands and highlands, yield the usual Central American products, such as chocolate, cotton, sugar, indigo, bananas, henequen or hemp. As to its mineral resources, gold and silver bullion and ores are exported to some extent. The railway system is being extended to join that of Guatemala.

Honduras is about 46,280 square miles in area, with a population somewhat over half a million; the bulk of which consists of aborigines or Indians, some ninety thousand of which are uncivilized. The ancient city of Tegucigalpa, with thirty-five thousand inhabitants, is the capital. The main port on the Pacific is Amalpa, where the country has a narrow frontage on the ocean; and on the Atlantic, Puerto Cortes, with various lesser ports. Honduras has very considerable mineral resources: gold, silver, copper and other numerous metalliferous minerals being found, and in some cases worked. The usual Central American products of timber, rubber, bananas, coffee, etc., are staple products; cattle-breeding is an important industry. To encourage all these matters the Government grants facilities, but labour at present is scarce. The interoceanic railway between the Atlantic and Pacific ports is well under way. Honduras owes its name, which is the Spanish for “Depths,” to its broken topographical configuration.

Guatemala has for its neighbours on the north the republic of Mexico and that small outpost of the British

empire, British Honduras, or Belize: the only "red" area, save British Guiana, to be encountered in all Spanish America. The northern part of Guatemala extends into the peninsula of Yucatan, and the republic has a narrow strip giving outlet to Atlantic waters on the Gulf of Honduras and Caribbean Sea, British Honduras blocking out the eastern coast-line with this exception. On the Great Pacific Coast, however, she has a frontage of 155 miles, whilst her area of 48,000 square miles is slightly greater than that of Honduras and somewhat less than that of Nicaragua. The population numbers two million people. Guatemala also possesses an interoceanic railway, from Puerto Barrios on the Caribbean Sea to San José on the Pacific; a line 270 miles long, giving access to the handsome capital, Guatemala City, which stands at a distance of seventy-five miles from the Pacific terminus; and thence its construction, which involved some heavy work, has been carried to the shore of the Caribbean Sea.

The country is traversed by the Cordillera of the Andes, with the general trend of that great chain from north-west to south-east, leaving a narrow Pacific littoral of forty to fifty miles in width—the most thickly populated portion. The Atlantic seaports are good harbours: the Pacific are more open. Five lines of steamers call at San José, linking the port with all the ports of the Great Pacific Coast, from San Francisco to Valparaiso.

The city of Guatemala is situated in a broad fertile plain, 4,594 feet above sea-level, and, seen from the heights of the hills which form its environment, it presents a handsome and picturesque whole, backed by the great Andine mountains, whence the volcanoes of Fuego and Agua—Fire and Water, well so named—arise. The city covers a considerable area; it is well laid out with some fine public buildings; and, as an important centre dating from the colonial *régime*, possesses numerous structures of the characteristic architecture of that period, among which the National Palace, the cathedral and the various churches are prominent. The dwelling-houses, however, are wisely built generally of one storey; for Guatemala is in that earthquake zone where nature takes such terrible toll of life from toppling walls. Notwithstanding

ing this, the dwelling-houses are often handsome and spacious, with that pleasing structure of *patio* and interior gardens generally encountered in Hispanic home architecture.

The present city is the third capital which the ravages of nature in earthquake shocks have rendered it necessary to build; for Guatemala la Antigua, the second capital, was destroyed by an earthquake shock in 1773, when the wrath of the volcano Agua, at whose foot it was situated, twenty miles away from the present site, was let loose upon it; as was also the case with its predecessor Guatemala Vieja, in 1541, which was wiped out by a crater-lake from the same source. Handsome houses, tree-planted avenues, splendid parks and public gardens, statues, theatres where Italian opera ever finds packed audiences, baths, railway stations, schools, the inevitable and engaging *plaza*, colleges of law, medicine, engineering, etc., form some of the features of this pleasing and important centre of Spanish-American civilization on the Pacific.

Guatemala was the home of the great Quiché nation, one of those famous civilizations of pre-historic America, which was overthrown by the conquistador Alvarado, in 1542, and at Santa Cruz de Quiché it was that the battle was fought in which the Spanish arms finally triumphed. Quezaltenango—"The Town of the Green Feather"—elevation 7,657 feet—is a place of historical interest, where some of the ancient native arts are still carried on. Indeed the country generally is of much historic interest. I have referred to the ravages of volcano and earthquake in Guatemala's history, and it is stated that she possesses, perhaps, the distinction of having more volcanoes than any other country in the world. Fronting on the Pacific coast is a series of stupendous cones, from ten thousand to twelve thousand feet elevation above the sea, and distant therefrom some fifty miles, rising from the coast zone unhidden from the view by intermediary hills, and commanding the attention of the voyager from the deck of the passing mail steamer.¹ One of these, Santa Maria (a terrible mother-saint indeed!), is 11,480 feet in altitude, and

¹ A full account of these volcanoes, by Dr. Tempest Anderson, appears in the *Royal Geographical Journal*, May, 1908.

in October 1902 she, after an appalling earthquake in which the unfortunate inhabitants of the town of Quezaltenango perished to more than a thousand, opened out a great new crater. Indeed, earthquakes and tidal waves along this afflicted coast, had been but premonitory symptoms of this disaster, and the Mexican sister peak, ever active, of Colima, away to the north, and the volcanoes of the neighbouring states of Nicaragua and Salvador, as well as the terrible eruptions of St. Vincent and Martinique, far away in the Caribbean Sea—all at or near the same time, attested the activity of the infernal and internal fires in the great safety-valve region of the earth's surface. The panic-bearing noise of the "retumbos," or subterranean roarings of the earthquakes (such as I have heard in Chile and Peru) were also the precursor to an appalling tidal wave, which swept the Pacific coast of Salvador with three great waves, washing out coast-villages and killing many persons.

The foothills of this Pacific chain are an area of Quaternary-epoch formation of peculiar fertility, and this is covered with coffee plantations, yielding the berry which has rendered the name of Guatemala famous. These were largely devastated. The whole side of the mountain of Santa Maria had been blown away by the eruption, forming precipices thousands of feet in height; the surrounding region was covered deep in ashes; and the cloud which was vomited from that fearful aperture rose towards heaven to an enormous height, which the captain of a passing steamer far out at sea measured with his sextant as eighteen miles!

But, notwithstanding its seismic dangers, Guatemala is a country of splendid future. From earthquake-dust we turn to the fertility of climate and environment which produces such splendours of the vegetable world as might make the mouth of the dweller on temperate British shores to water! Its three zones, hot, cold and temperate, as ever in these cordilleran regions, produce coffee, cocoa, bananas, sugar-cane, cotton; and so splendid a profusion and variety of tropical and sub-tropical fruits as form the basis of an important export trade. The plantains—resembling the bananas—are exceedingly palatable and nutritive, growing to twelve inches long; and it is stated that a small plantation,

forty feet square, of this fruit will yield four thousand pounds of the dried fruit—nutritive substance which, it is said, will support fifty persons as against wheat on a similar area which would support only two! *Viva* the plantain, then!

The coffee business, both of growing and export, is principally in the hands of German colonists, and is a thriving industry, more than twenty-five times the extent of any other in the country. From the thick forests of the lowlands mahogany, pine and oak are extracted and exported, whilst Guatemala is also a rubber-producing and exporting country. Germany, the United States and the United Kingdom, in the order named, do business with the country's imports and exports. Minerals are found to some extent, including gold and lead; and coal and water-power both exist for manufacturing purposes.

In addition to the interoceanic line there is a railway along the upper part of the Pacific Coast zone to Champerico—another coast port—through the coffee-plantation region already mentioned. There are other short lines giving a total of about five hundred miles, and a certain amount of steam navigation upon the rivers and lakes. Some of the lake scenery is very beautiful, whilst the largest of the mountain lakes, Atitlan, is overlooked by the great volcano of the same name, 11,570 feet in elevation above sea-level.

The traveller to Guatemala need not necessarily be obsessed by the fear of seismic disturbance, nor fear to repair thither to settle, or invest his capital in business on that account. Beautiful fertile valleys, lovely scenery, a progressive people and a unique geographical position on the Atlantic and Pacific oceans have invited many foreigners thither, and will continue to do so. Only five days' sail intervenes from New York, and fifteen from Europe, so that the republic offers relatively easy access to the tourist and the traveller. It cannot be long, also, before the railway system of Mexico and Guatemala are linked together, and thus will rail communication with New York and the whole of the North American continent be established.

Central America, as has been shown, merges into Mexico on the north. Thus we leave it: a region which has not had justice done to it yet, due both to the acts of its politicians,

and to certain phases of its topography and climate, which have bulked, as defects, larger in the mind of Europe or North America than the good points of the land. As to its political turbulence it must be remembered that the great body of the people have no hand in this, and suffer by reason of unscrupulous or ambitious politicians which the peculiar social conditions permit to be pitchforked into the front. As to the evil reputation for swamps and fevers, whilst it is true that such conditions do exist, it must be recollected that by far the greater part of these regions consist of high, healthy mountains and plateaux, and fertile valleys, where Europeans can often find their own accustomed environment. With our universalist purpose, kind reader, we must hope to give these conditions their due measure of relativity.

IV

MEXICO : THE LAND OF ROMANCE

A LONG white trail winding over a barren plain, broken here and there by a stony foothill and some thorny cactus at its base : a dusty trail, from which a whiff of adobe dust rises from our horses' hoofs with pungent odour ; a trail leading on over the desert—far away and shimmering in the solar heat arising from its floor—towards a distant city with white walls and church domes above groves of green trees ; and still far away beyond that a faint range of blue hills ; the whole over-arched by the calm azure of a cloudless tropic upland sky. Along the dusty trail comes a white-clad *peon* native, with *guaraches* or sandals on his feet (footgear inherited probably from some remote unknown ancestor of Egypt or Asia of prehistoric ages past), and he passes journeying as he did centuries ago, and as doubtless he will journey centuries hence. "Buenos dias, Señor," he says, as he salutes me in passing ; and "Buenos dias," I reply from the height of my saddle. Anon a vaquero on wiry and obedient steed rides past and also greets me ; and again a sad-faced Indian woman with a baby at her back slung in a *reboso* or shawl comes along this dusty trail and glances timidly up at the white foreigner with a "Buenos dias" as we meet and pass. Can you guess, kind reader, what country this is ? Easily if you have ever been there. It is Mexico, that land of strong colour and history, whose singular charm is never quite erased from the memory of the traveller who has sojourned in it.

But this peaceful atmosphere of the Mexican upland, the Great Plateau or Mesa Central, covers a strenuous past ; romantic, bloody ; and any study of it will fill it for us with strange pictures of what man has done, stretching out of

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the mists of unknown time away from the secrets of his origin upon the old new-world ground which we are treading. Pictures of the strange empire of the Toltecs and the Aztecs will crowd upon us: of Montezuma and his armies and priests, of sacred Teocallis and strange pyramids, of lakes and causeways and cities set thereby, of savage priestcraft, barbaric pomp and despot rule, of untold gold; and then—a trumpet call, here are the helmeted men of Spain! Upon us crowd the chapters of the viceroys and the priests, three hundred years of rule and misrule; and then revolution rears its head. Empire arises and falls—falls when that fateful volley resounds from Quereteros' hills to pierce the heart of fated Maximiliano. Blue and serene the heavens stretch over all; over tableland and forest, scorching desert and fruitful valley, sterile range and snow-capped peak; over carved and ruined temples, wrapped in the mystery of pre-historic ages and the secret of their builders' origin—all these rise in my mind as I write, and the creaking of my sun-warmed saddle and the picturesque and unkempt figure of my *arriero* arise as to its accompaniment.

But let us turn to our topography. The book of man and the book of mountains have their pages intermixed in marked degree in Mexico, which, like the Spanish-American countries generally, of Cordilleran structure, present, as the super-note of Nature's work, anthropogeographical conditions of intensive character. That is to say, Nature has divided the land into great natural zones, as we have already seen in Central America, of coast plains, mountains, and great plateaux; and as we shall see later on in a still more marked degree in the Andine countries of Peru and Ecuador.

Mexico, of course, is not only—or principally even—a Pacific State, although probably the first civilization, from Asia, approached her on that side, in distinction to the western civilization from Europe which descended upon her from the East. She belongs at present more to the Atlantic than the Pacific, stretching as she does between both oceans. On the western side Mexico has a general coastline on the Pacific of some two thousand miles in length. The greatest width across to the Gulf of Mexico, the Atlantic waters, is 760 miles and the area, nearly nine times

the size of Great Britain, is seven hundred and sixty-seven thousand miles. The northern boundary of Mexico is formed on the Pacific slope by a line running from the coast to the Colorado River, forming the boundary with California, Arizona and New Mexico, running thence to the Rio Grande at El Paso. From that point the boundary is a natural one, the Rio Grande, which runs south-eastwardly and falls into the Gulf of Mexico, Texas forming the American frontier to the north. On the south, Mexico, beyond the Isthmus of Tehuantepec, is bounded by those Central American States of Guatemala and British Honduras, which we have described in the former chapter.

Topographically, Mexico consists of a great plateau, known as the *mesa central*, or central tableland, also termed the plateau of Anahuac, lying at a considerable elevation above sea-level; and the Pacific and Atlantic slopes respectively. The edges of this great tableland are formed by the Mexican Andes, the mountains of the Sierra Madre which surround the plateau on almost three sides and which form steep escarpments and excessively rugged slopes and terraces which descend to the ocean. At their bases are the sandy coastal plains of Tertiary formation. The great plateau is about eight hundred miles long upon its main axis from north-west to south-east, and its greatest width, in the north, is about five hundred miles; tapering—as indeed the whole country tapers—to the south, and disappearing in the valley of Mexico and the volcanic ranges which surround this.

The plateau is an inclined plane sloping upwards from its wide portion in the north, with a general elevation of about four thousand feet above sea-level, to eight thousand feet at its southern end; and it is intersected longitudinally by lesser ranges of hills which form the crests of what, in earlier geological times, were the summits of mountains paralleling the general Andine structure; the valleys between which have, in the course of time, become filled up by volcanic and climatic agencies, thus forming the plateau.

The mountains of Mexico, the Eastern and Western Sierra Madre respectively, are principally of underlying granite structure, with the Jurassic, Cretaceous and Tertiary rocks occupying large areas. The limestone of the lower Creta-

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ceous system extends across the country and points to the sea-bed origin, of recent epochs, as we observed in Central America; whilst the remarkable flat peninsula of Yucatan is a Tertiary limestone. The result of the geographical formation of the country is a marvellous wealth in minerals—silver, gold, copper, coal, etc., and striking and picturesque scenery. The Mexican mountains rise, as to their general crest line, considerably above the elevation of the high plateau; the passes from the coasts being generally from 8,500 to 10,000 feet above sea-level: these being the altitude at which the railways to the Gulf of Mexico and towards the Pacific Ocean respectively traverse the Cordilleras. In Mexico only three or four peaks pass the limit of perpetual snow, these being Orizaba, fronting on the Gulf of Mexico with an elevation of 18,250 feet; Popocateptl, or the "Smoking Mountain," 17,250 feet, of conical form, and Ixtaccinuatl, or the "Sleeping Woman," 16,960 feet. These two last are quiescent volcanoes, overlooking the valley of Mexico and forming the culminating geographical features of the country. The Sierra Madres, which mountains have approached each other here, are connected by the more recent volcanic range of which those two high peaks are the main summits. The appearance of these snow-covered peaks is striking and beautiful, although their snow-cap is small in comparison with the giant Cordilleras of South America.

Mexico is well served with railways, as far as its eastern side and the great plateau are concerned, for two trunk lines run southwardly from the United States border to the City of Mexico: distances of about one thousand and six hundred miles respectively. These longitudinal lines are the Mexican Central and Mexican National; whilst the Mexican Vera Cruz Railway, the solid-built British line with its marvellous scenery, runs transversely and connects the capital with Vera Cruz. The Mexican Central runs also to the coast at Tampico. But the Pacific slope is much less accessible from the interior, and no railway is, as yet, completed thereto, although work is being rapidly pushed on and will be finished before long. The total railway mileage of Mexico is more than fourteen thousand, a splendid showing for a country so recently emerged from political chaos. Mexico,

however, possesses an interoceanic railway: the famous Tehuantepec line, of which she is justly proud.

The Tehuantepec Isthmus and railway is developing into a trade-route of much importance to the commercial world, and without much flourish of trumpets. Moreover it may be expected to be a formidable competitor of the projected Panama Canal. The railway across the Mexican Isthmus is only 192 miles long, and the highest altitude reached—at the Chivela Pass, the water-parting of the Continent between the Atlantic and Pacific Ocean—is only 730 feet above sea-level. The new ports at both ends of the line, which have been constructed at heavy outlay by the Government of Mexico, give splendid facilities for ocean steamers. The passage from the northern part of the Great Pacific Coast, the seaports of British Columbia, Puget Sound, and San Francisco, to New York and Liverpool will be lessened by 5,000 miles as compared with the journey via Cape Horn, and it is to be recollected that the Tehuantepec Isthmus is nearer to the great "Axial Line" of the world's commerce, and to the latitudes of the huge, populated regions of North America and of Europe than Panama by 1,200 miles. Of course transshipment is a necessary part of this route, but it is estimated that rates will always be much less thereover than by that of the transcontinental railways of North America. The shipping of Canadian wheat from Vancouver to Europe may possibly be cheapened by this new route; whilst some of the Japanese steamship companies are to be benefited by the use of this route for American and European Atlantic ports, as contrasted with the route via Suez. This splendid achievement in isthmus, railway, and harbour building is due to the financial enterprise of the Mexican Government and the constructive skill of the British engineers and contractors who built it: and it must form an important factor in the economic development of the Great Pacific Coast.

The portion of Mexico which lies upon the Pacific is formed of the wide coastal plain of the north, and the forest-covered mountain spurs which descend to the very line of the breakers in the south; and is embodied in the States of Lower California, Sonora, Sinaloa, Tepic, Jalisco, Colima,

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Michoacan, Guenero, Oaxaca, and Chiapas, which latter borders upon Guatemala. Of good seaports and harbours adown this vast stretch there are comparatively few. Yet Acapulco is one of the best ports on the whole of this vast line of the great coast which we are considering, ranking next to San Francisco in California. Other good ports are Guaymas, Mazatlan, San Blas, Manzanillo, and Salina Cruz, the last named being the terminus of the Tehuantepec railway. Another place of importance is La Paz, on the peninsula of lower California. Pearls, gold, timber, fish, cocoanuts are some of the products of this coast; and it contains, along with handsome cities and cultivated valleys, some of the most savage and unexplored territory in the republic. Typical of these conditions is the State of Guenero.

The City of Mexico and its strange and unique blending of the old and the new belongs more to the Atlantic than to the Pacific world at present. The traveller who has trodden its quaint streets, encircled its singular and beautiful valley, and enjoyed the hospitality of the people of its luxurious suburbs, such as Tacubaya, San Angel, and Tlalpam, will retain pleasing memories of this Paris of North America. The capital is the greatest historical centre upon the whole continent; the most marked of all in its traditions and architecture. Be he of what race he may, the foreigner will hope that the strenuous modernity of the north will not unduly influence Mexico, and that this handsome City of the Lakes, with its azure sky and pleasing environment will remain a characteristic centre, as it is at present, of the civilization which Spain implanted: an offset to (and an example in some respects to) the progressive Anglo-Saxon peoples of America.

The exigencies of long travels have enabled me to view Mexico and its people and their life intimately, and during several years; and I retain lasting impressions of this progressive, yet primitive and pastoral land, and of the character of its civilization. Framed by my horse's ears the landscape has presented itself through many marches amid rocky defiles, broad plateaux, and the virgin forests, beyond the consuming radius of the locomotive. Most typical of Mexico, both as to its scenery and its people, must be considered the great plateau. Dusty, treeless and *triste*

it is in places, grand and diversified in others, vast, calm, and wild generally, with the poor villages of the *peones* alternating with the handsome Hispanic-built cities for which Mexico is famous. And the mines—ha! the mines of Mexico are a volume to themselves. Saints and silver are inextricably interwoven; the bounty of nature was never so lavishly displayed as in these rocky ribs wherein men have delved since the time of the Aztecs. The history of Mexico is, indeed, largely a history of Metallurgy. Gold was the bait of the conquistadores and the alleviation of the disease from which they suffered—as Cortes informed Montezuma, and that fatalist monarch sent supplies of the yellow metal in response. Silver was the spur to the endeavours of the Spanish colonizers; the lever of civilization as well as the cause of much atrocious oppression, at which our blood boils even to-day. The singular blending of piety and avarice, cruelty and religion, toil and *fiesta*, which marks out the mining of Mexico—as of Peru—from the rest of the world will ever impress itself upon the traveller and student in this land; and as the failing sunset casts its shafts on ruined mine and stone façade both praise and protest spring to his mind: marvelling at the ways of men.

The scenery of the Mexican plateau is perhaps unique in character, differing, although almost indefinitely, from the arid regions north of the Rio Grande, in the United States. Mexico, indeed, is a land of transition between North and South America in every respect, whether as to scenery, climate, people, or flora. Let us draw rein a moment. The last rays of the setting sun are tinting the tops of one of the numerous secondary ranges which intersect the plateau. The deep blue shadows cast upon the slopes bring into strong relief the carmine-tinted serrations of the summits—tinted by the sunset, and the main shadow of the range extends far out, encroachingly, upon the plain, its advancing edge cutting the brown wilderness like the shadow of a sun-dial—which indeed it is. The temperature falls rapidly. The atmosphere, freed from the heat-vibration arising from the ground, forms no obstruction to the distant panorama, where successive peaks and ranges develop their naked and seemingly geometrical forms to the eye. The

shadows of the distant ranges cast by their own summits upon their flanks bring into sharp relief the mysterious and untravelled cañons which descend their slopes; rising in distinct tracery, now that the sun is low, from the broad sandy deserts which flow up to their bases. The sandy sea extends beyond the termination of the individual chain and is lost in the horizon of the earth's curvature. A faint haze lingers around the bases of the hills, due to sudden atmospheric changes brought about by the high elevation above sea level, and a sense of repose is engendered in the onlooker, not untinged with melancholy and mystery—a far-off sensation belonging perchance to the borderland where the material and the ethereal meet.

It is as evening falls that the varying form of the mountains in arid, tropical countries such as this are revealed to the eye. The action of the elements upon them is shown in the steep, terminating precipices, scarred by white gullies, where intermittent rains are hurtled down, and the slopes and terminating talus at their bases, the work of these currents, merging by gradual declivities the cones and pyramids of the upper members into the semi-cylinders and planes of the bases—topographical geometry of much interest in the study of hill-formation. Yet a feature of the formation of the hills of the Mexican *mesa central* is the abruptness generally of the junction between the hill and the plain, bearing out the character of filled-in troughs of Andine mountain ranges, leaving isolated tops protruding from great alluvial plains.

As the sun sets a cool breeze passes over the face of the land and revives the flagging leaves and flowers of the cactus, released until to-morrow from the glare of the perennial sun, for the diurnal changes of temperature are very abrupt here. The silence of the twilight is scarcely broken, except by the occasional howl of the coyote, or the rustle of the passage of the *tecolote*, or desert owl; whilst among the rock and stunted shrubs at the edges of the arroyos, the ravines by which the hill waters have carved passage to the plains, the breeze whispers sibilantly and eerily, and gently stirs the sand around some patch of whitened bones lying upon the desert floor: bones of ox

or mule betokening where fell some beast of burden. Such is the Mexican plateau, in those long stretches of wilderness between the cities and their surrounding cultivation : and the sunset falls upon it in gorgeous colours.

I formed camp one evening in a lonely remote cañon of the Mexican Sierra Madre, having had a *jacal* or Mexican wattle-hut built for a prolonged stay, for the purpose of examining the mineral resources of the neighbourhood. At the head of the cañon was a small lake, and the temporary dwelling was constructed upon its shore, and into its waters I plunged sometimes for a morning bath. At times a flight of ducks circled thither from over the mountains, and occasionally afforded an acceptable addition to my mountain larder. My servant, José, an old *peon*, was a veritable character, but he served me well, making singular dishes of native character and guarding the camp when I was absent with my other attendants upon prospecting expeditions. One day a fearful *norte*, or north wind, blew up the cañon, with its accompanying cloud of dust characteristic of the arid adobe plains of Mexico "mingling the ravaged landscape with the skies!"—and incidentally with the food and into the eyes and nostrils of the wayfarer, to his serious inconvenience. So fiercely blew the blast that it carried away a canvas tent, which formed the "kitchen," and deposited it in the lake, whilst the wattle-hut itself seemed as if it would be moved bodily from its situation. Among other things the fire blew away, but I shall never forget the figure of old José almost sitting on the last embers to shelter them from the same fate. For hours he sat there, mournfully eyeing the wreck of his culinary department, but saving the fire, for the Mexican poor do not at all like their fires to go out. Indeed, in their own adobe huts they jealously guard the embers and bury them in the ashes at night so that they spring into flame when fanned in the morning; whilst the devout making of the sign of the cross around the fireplace would never be omitted by the poor *peon* or his woman before beginning the day's culinary operations.

The night fell exceedingly cold after the *norte* had subsided, and it was in vain that I endeavoured to get warm in my cot. Blanket after blanket I piled upon it but without

effect; but at last the reason struck me—the cold was coming not from above, *but from below*; for the cot was but a canvas stretcher, and the mattress I had discarded as superfluous. Old José was sleeping comfortably enough, rolled in a single poncho on the floor, and we re-made my bed, putting as a mattress thick layers of newspapers which I had received from England by the mail a day or so before. I do not think the editor of *The Field*, the *Weekly Times* or *Spectator* ever suspected to what uses those valuable periodicals would be put in the mountains of Mexico! Paper is a good preventive against cold; and no doubt the Arizona man—whom I have mentioned elsewhere—who made his bed, on one occasion in the desert, with a copy of the Sunday edition (68 pages) of the *New York Herald*, had more reason than might at first blush appear!

So I slept warmly after that, but when I arose a slight snowfall, a rare thing on the Mexican plateau, had taken place in the night, and as I emerged on horseback from the mouth of the cañon in the early morning, the forms of four grim, gaunt coyotes stood there almost menacingly, rendered bold by hunger. But coyotes never attack a man. Unslinging my Winchester carbine from the holster I took aim, but the horse, impatient to be away, would not stand an instant to fire, and the coyotes faded away among the desert scrub after the manner of their kind.

The early morning air is an invigorating tonic on mountain and plateau; a veritable sanatorium is the high region, free from any of the malarial disorders of the lowlands of the coast. The great cañons which flank this region are stupendous; and the mountain trails offer hard, and at times dangerous wayfaring. "Take me home another way," I said to my *peon*-guide, after the day's work, desiring to see as much of the neighbourhood as possible. He did so with a vengeance! Instead of following the line of the river whither we had come, we crossed it and began the ascent of the rocky bluff upon the other side; and whilst the guide was a reliable fellow, and I had generally little hesitation in following him, on this occasion he was evidently travelling a road he had not travelled before. Soon the narrow zig-zag wound up the steep at an appalling angle. The horses' breath came

fast and short; their limbs trembled, and their bodies were at such an angle that only clutching the mane kept the rider in the saddle. In mountainous countries the horseman soon learns the value of the short mane clutched in the bridle-hand. The way was extremely perilous, and I doubt if a horse had ever ascended it before. One false step and we should have rolled down hundreds of feet whither we had come. "Keep going, señor, keep going," was the exhortation of the guide; which indeed was not necessary, for I knew well enough that if my horse stopped once he would overbalance, and I plied him unmercifully—yet really mercifully—with spur and whip, and up the narrow deer-track the trembling brute reared and scrambled, sending down showers of stones. My feet were loose in the stirrups, for it might be necessary to alight without a second's delay—notwithstanding that the rock wall going sheer downwards left no alighting-place. Had that trail extended upwards for another fifty feet we could not have reached the summit. As it was we reached it, the horses foaming and exhausted, and the nervous strain was over. "Señor," the guide replied to my censure for having brought me up such a frightful place, "I came up here when a boy, on mule-back, but the road has fallen away since then."

During years of journeying in the Cordilleras of the new world, within the region of the Great Pacific Coast, the traveller will ride perforce into appalling places—nightmare tracks where clouds hang below you, and where chasms open on every hand. On one occasion, which I have recounted elsewhere, a landslide occurred at the moment of passing along a precipitous trail, and the mule I rode was carried to destruction by it, and I barely escaped to tell the tale.

Incidents of life and travel in the intimate heart of Mexico by the foreigner whose pursuits have called him there are picturesque and tinged with the almost mediæval character of the country. We are in a continual atmosphere of the middle ages; of horseback journeying; priestly rule; and of Quixotism and courtesy inherited from Spain of the viceroy—pleasing and singularly in conformity with the land. The highwaymen, however, have almost disappeared, fortunately, and we may journey with a general feeling of security

almost anywhere in Mexico now. Yet in the lonely desert stretches robbery with violence is by no means unknown. I rode out one morning early from a town of the plateau to journey to another place—a road I had often traversed—through a wild range of hills, a distance of some thirty miles or more. I was alone, having sent on my attendant the previous day upon some matter of the mail. I have always enjoyed journeying alone in the wilds. There is to me much of allurements in the changing panorama of the desert, the rock formations, the singular types of vegetation (where nature, armed at all points with thorns against intrusion, has created or developed an astonishing range of types of cactus and prickly shrubs). The far horizon and the cloudless sky and the general sense of communion with nature, moreover, are ever attractive. So when I heard a horse's hoofs upon the rock road some way behind I did not feel pleased, and gently spurred my horse to a quicker pace without turning round. But the individual behind, whoever he was, seemed desirous of overtaking me; and as it is well in such situations to know the bearing of events, I drew rein to observe him as he galloped up. Courteously enough he saluted, asking if I objected to his companionship on the ride, for he was bound in the same direction as myself. I could hardly reply in the negative, so we rode along, myself wrapped up in some British reserve purposely that he might not expect much conversation—which, however, he supplied. I knew the man by sight. He was a Mexican who owned a little gambling den in the town, and operated anywhere where *ferias* or fairs were going on and there were people to be fleeced with his faro table; and I did not care for the acquaintanceship at all. However, he was respectful enough—the British reserve is a useful cloak at times. At last we approached some broken ground in the vicinity of an *arroyo* or ravine, and I observed that my companion looked around rather fearfully. "Pardon me, señor," he said, "would you mind telling me if you carry a revolver?" I replied in the affirmative, lifting the flap of my front saddleholster where the butt of a long-barrelled Colt's revolver was disclosed. "Well," he replied, "I only asked as sometimes upon this road there are *mala gente* about." I replied that

I, at least, carried little of value, adding that I thought we could give a good account of ourselves against any footpads, if such a contingency should arise.

But the gambler seemed uneasy. I had observed previously that he carried in front of him a large, heavy-looking bundle wrapped in a *poncho*; and, moreover, when his horse stumbled, as it did now and then, I heard a faint jingling sound, as of coin! Probably my uninvited companion was carrying the spoils of some good gambling run in heavy Mexican dollars; for there had been a protracted fair at the town. Just as we passed the broken ground his sorry horse stumbled again, and something must have got loose in the package, for continuous musical jingling came from it—unmistakably of silver coin! The gambler seemed much perturbed at this occurrence. “Perhaps he thinks I want to relieve him of it,” I cogitated, and willing both to leave him to his own devices and to expedite my own march, which was getting rather slow, I said I must gallop on, as his horse did not seem to be in very good condition. But I was scarcely prepared for what he would reply. “Señor,” he said, “I know you are an Englishman, and so incapable [*sic*] of doing wrong to a fellow-traveller”—going on to say that the sack in front of him was full of silver, and that he was afraid of being attacked on the road, which was why he had presumed to ask my companionship, as he was unarmed, and believed some men were waiting in the *arroyo* to rob him. I could not refrain from laughing at the situation, and promised to give him my company past the debatable ground. As soon as the town came in sight a few miles away, I bade adieu to Mr. Feeble-mind and Ready-to-halt, and put spurs to my horse, and the faint jingling of silver coin soon died away behind me.

If the scenery and incidents of travel in Mexico are picturesque, the people of the working-class are equally so; singularly in conformity, as it were, with their environment. They are much closer to nature than the peoples of Anglo-Saxon America, for the commercial spirit of the Anglo-American seems to have divorced him from the spirit of the soil and the countryside, as I have ventured to reflect in the chapter upon California. The Mexican *peon*, in his struggle to

MEXICO. PANORAMA OF ZACATECAS FROM ITS HILLS.



obtain his means of subsistence among the rocks and thorns upon the desert of the great plateau, shows a remarkable adaptability; he is full of patience—a remarkable patience and care in the making of things and in the going on his way such as is not found in the machinery-bred (if I may use the term) people of the civilized world of America or Britain. As to its religious spirit and homely doings connected therewith, Mexico is the “Holy Land” of America, and this atmosphere is a very strongly-marked characteristic of the country. The towns set on these barren hillsides in some cases might be the towns of Palestine. Jerusalem and Nazareth are duplicated; the deserts, the palm-trees, the vines and fig-trees; the mountains and the blue sky—all seem the counterpart of Bible scenes; and the pastoral life and the relation between the sexes are those of the patriarchs. The feudal system which obtains as regards the land and the landowners give rise largely to the environment; and the great stretches of wilderness, inhospitable mountain ranges, torrential stream, fertile valley and smiling oasis, cause life in Mexico to be removed from the American life of the north “as far as the East is from the West.” Indeed, the singular blending of light and shadow, colour and quaintness, carries the mind of the traveller constantly to the Bible world—anywhere except America. Let us change the scene a moment. I leave my hotel, an old stone building of the time of the viceroys, and take my way up the crooked streets of—is it Jerusalem? Here are flat-topped, white-walled houses, standing pleasingly with the barred windows and balconies at angles consonant with the steep, hill-climbing cobble-paved streets, up which white-dressed peasants are driving asses. The sun is going down, and its saffron glow forms a contrasting background behind the old cathedral tower, whilst on the other side the Mexican moon throws a pale light on the mellow tinge of its richly-carved façade—a poem in stone worth journeying far to see. An old stone arch I pass under: more crooked upward streets, and steps cut in the protruding stone of the mountain-side. The moon ascends, and flat-topped dwellings are sleeping under the calm white rays. Soon I emerge upon a dusty cactus-bordered road upon the plain of—not Palestine, for this,

kind reader, is a description of the town of Zacatecas upon the great plateau.

A striking attribute of the Mexican people, especially the *peon* class and Indians, is their intense religious customs—often semi-superstitious. It is a world where saints and sentiment rule. Behold the numerous crosses set everywhere, on bare hill-summits against the sky; by the trickling spring or well which renders life possible in some dusty hamlet, or along the desert road to mark the spot where the blood of some unavenged Abel cries from the ground—for Cain stalks easily through the lands of Spanish-American peoples! Exceedingly pathetic is this deep religious sentiment in everyday life, and the belief in the bounty of Providence and the unseen world of these poor people; who, it might be said, have nothing in this world. Whether it is the poor Indian woman in the adobe village church, lifting her unwashed face to the simpering countenance of the waxen doll in gaudy raiment within its glass case, with some homely petition; or the poor miner crossing himself before he descends to his dangerous subterranean work, or removing his battered hat as he passes the precincts of a temple—be it what it may, it is a very real element in their lives. The women of Mexico—not only the poor but the rich—have a saying among themselves when they see the sun shining amid a rainstorm, that “the mother of Jesus is interceding for our sins.” Thus even the sunshine shower—the smiles and tears of nature—has some soft pious imagery.

Among the Indians in some parts of the country religious customs prevail which appear to be a mixture both of Aztec and Romish theistic influences. Of this nature are the festivities and dancing at the village of Zirizicuaró, in the Pacific State of Michoacán; which becomes a land of pilgrimage for the Indians for the three days of the Epiphany. With their distinctive dresses, kilt-like costumes, plumes, and strange headgear, the Indians form singular, picturesque groups. Sunshine and smiles of welcome prevail everywhere, and numbers of upper-class señoritas form an interested audience. The native musicians, with guitars fashioned from the shells of the armadillos, make music for the dance, which lasts for two whole

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days, and an action-song forms a constant interlude, with a mournful refrain ending with—

“Ay Jesús,
Solo Jesús
Quizo morir en la Cruz.”¹

Probably the dancing dates from Aztec times; and in some of these festivities the performers dance until they are exhausted.

I am halting awhile at some other remote Mexican village, far from the civilization of the outer world; and the village priest, who has called upon the stranger within his gates, has invited me to accompany him to know the village and the church. The little bell is calling; mass is shortly to be celebrated. On the hill we meet a red-blanketed *peon*—he is a *vaquero*—and his inflamed visage shows that, to recover from the effects of last night's carousal, he has taken a stiff pick-me-up of fiery *mezcal*. “Ah! Don Tomás, what is this?” the *padre* says reprovingly. (For all men are Don, be they blanketed or coated, in the republics of Spanish America.) The sodden Tomás strives to wipe his alcohol-stained lips with trembling hand on the edge of his poncho-blanket, takes off his battered Mexican hat of monstrous crown, and utters a thick, “Como ha pasado usted la noche, señor padre?”—the universal greeting—“How have you slept, father?”—continuing half-shamefacedly, “After the christening yesterday, *padrecito*, came a few *compadres*——” It is enough; the word *compadre* in Mexico, or Peru, or Chile covers much. A “compadre,” as every Spanish-American traveller knows, is a sponsor or god-parent, a relation very freely entered into among these people, and looked upon as a binding and enduring tie. It is considered a great compliment to ask a person to be a “compadre.” And a foreigner who stays for any length of time in any particular spot cannot escape—nor need he desire to—invitations to become the god-parent of some to-be-christened Mexican baby; some José, Tomás, Lola, Dolores or other. “He is my compadre,” a Mexican *peon* will say of another, and

¹ “Alas! Jesus: Jesus alone
Was willing to die on the Cross.”

The words “Jesus” and “Cruz” rhyme in Spanish.

this means eternal friendship and forbearance—even in his cups, which is a frequent condition! Drink is one of the greatest curses of these poor people. If European man had let them alone as regards alcoholic drinks when he came; left them to their *pulque*, they would have been better off. For *pulque*, although intoxicating, and responsible for a good deal of drunkenness throughout the country, is a relatively harmless beverage in comparison with the fiery alcohols, especially the *aguardiente*, or cane-rum, which is manufactured and sold by the great sugar plantations. It is a curse of these tropical lands where the sugar-cane grows that the making of rum for consumption by the Indians is often a better paying matter than the making of sugar. Also, the great sugar planters and landowners are often the law-makers of the country, so that legislation upon temperance lines is not to be looked for in Mexico or Peru or Chile. The abuse of alcohol has degraded the aborigines of the Spanish-American world, and plays deadly havoc among the natives of these lands.

I do not know whether the lower class, the Indians and *mestizos* of Spanish-American countries cherish affection for their dead in a less degree than more civilized people. Probably they do. The cemetery of a Mexican or Peruvian village—the “Campo Santo,” or Sacred Ground, as it is termed, is a melancholy place, far removed from the green churchyard of rural England. Behold an arid-looking enclosure surrounded by an adobe wall; absolutely bare of vegetation, and far away from the town upon some naked hillside or bleak plain—a *triste* golgotha which strikes melancholy to the heart. If it is a rich man who is being buried there is a great procession of friends, and the funeral cortège halts outside the cemetery, whilst prominent friends deliver long rhetorical speeches, extolling the virtues of the deceased (or inventing them if he had none). On these occasions the Spanish-Americans give full rein to their love of simile and poetic expression, and, in truth, it is an opportunity for verbal indulgence which is often seized upon by local orators. I attended the funeral, on one occasion, of a friend, the principal merchant of a remote town in the Andes, and what struck me as quite remarkable was the large muster of silk

top-hats among the mourners. I remarked upon this to a friend. "Ah, señor," he replied grandiloquently, "civilization has penetrated here, as you see." Many of those hats had been worn perhaps once in their owner's lifetime, and possibly would never be worn again; and their shapes and sizes indicated that they were of remote fashion.

But perchance it is only a poor *peon* or *Cholo* that is to be interred. Listen! Adown the wind comes a mournful dirge, and winding from far-off among the rocks and over the sandy cactus-grown plain appears a long procession of poor blanket-clad, dirty, picturesque, semi-Indian men and women, carrying their dead on the simplest form of stretcher. There are no orations, but the women freely weep and loudly wail, and the men are not slow to respond; and that was what we heard afar off. The crowd is numerous, for none who had had the slightest acquaintance with the deceased would absent himself on the occasion. And there, in addition, are the numerous *compadres*—that singular relationship to the Spanish people, often stronger than the ties of blood. Into the stony ground of the bare, melancholy "Campo Santo" the dead is put. No "useless coffin" encloses the dead, neither in "sheet nor shroud" do they wind him, for the poor of Mexico or Peru cannot afford coffins. The body is simply rolled up in a sack and buried; covered up from the ravages of the birds of prey or the dogs which haunt the place when they can get in. A couple of sticks are rudely nailed together in the form of a cross and planted there, and the funeral of the poor is over. No one ever returns to tend the graves; and the rude cross soon falls away and the sepulchre is obliterated.

In Mexico the patronage of the saints and other holy personages is freely invoked by the constant use of their names which the poor miner or tiller of the soil bestows upon his field or mine. Every saint in the calendar is represented over and over again in the mining regions, as well as the name and attributes of the holy family. Some of the designations applied to commonplace things are rather startling to the foreigner, and shock his sense of fitness at times with their seeming, but not intentional, profanity. It is startling to ask the name of a mine and to be told by the

red-blanketed owner that it is called "Sangre de Cristo," or "Sagrado Corazon." This reminds me of a Californian prospector who came one day to my camp—an enterprising if irreverent *gringo* who had been examining and taking up some ancient mines. Four of these mines had particularly struck his fancy; abandoned old workings with—as he averred—"millions in them"; as soon as they might be set in order with modern appliances. They were such mines as occur on every hill, it might almost be said, in Mexico and Peru, positively waiting to be claimed. Well, the Californian took up a group of these mines. Three of them were called, "St. Matthew," "St. Mark," and "St. John" (San Mateo, San Marco, San Juan) respectively, but the fourth had been unnamed, or its nomenclature forgotten. Did the enterprising American follow out the natural sequence and christen it "St. Luke"? He did not; for the mine was perversely registered under the name of "The American Cocktail!" Such an incident, indeed, is typical. The present spirit of the American of the United States—promoter, capitalist, prospector, drummer,¹ as he hurries through Mexico fresh from the atmosphere of Chicago or St. Louis, is far removed from a spirit of reverence, and before him—

"Ancient and holy things fade like a dream."

But the Californian was a good fellow and typical of his kind. He informed me that he was a "Native Son of the Golden West," an assertion which, of so poetic a nature coming from such a distinctly practical source, caused me at first some surprise, which, perhaps, I showed, as he added: "Ever been in Californy?" I replied in the affirmative, recollecting at the same time that the young men of California have an Order or Society of "Native Sons of the Golden West," which explained the description regarding his nativity. The Californian had approached my camp in the early morning—I was camping in the mountains of Durango—riding a somewhat "razor-backed" steed, and his *alforjas* or saddle-bags bulged out with mineral samples, whilst the handle of a small pick protruded therefrom.

¹ Commercial traveller.

"Guess you're an Englishman," had been his greeting as he came to a halt in front of my tent, and I admitted the soft impeachment. "Well," he added, "down there at the *hassyender* (hacienda), Don Hosey Figgero (José Figueroa)—confound them plaguey Spanish names, I never can get them just right—they told me there was an 'Ingles' up here, and I guessed it would run to a cup of coffee." The hint was sufficient; I bid my visitor dismount, and as the *desayuno*, or light breakfast which at an early hour is partaken of in Spanish America consisting of coffee and bread and butter was just ready, I invited him within; and we discussed the mining prospects of the region; for, as he informed me, he was a prospector taking up ground for some capitalist friends of San Francisco. "We're going to make things hum around here, and don't you forget it," he said. "Them mines is bully"—and here he described the group of which I have before made mention, including the "Great American Cocktail" sandwiched in between the saints. I duly congratulated him upon its possession. "But that ain't all," he went on. "I have just got a little thing which will turn out one of the finest propositions in the country, if I know what I am talking about; one of the best lodes of silver-copper you ever heard of"—and he indicated with a sweep of his arm a distant cañon which intersected the hills within view of the open door of the tent. I listened attentively.

"A copper lode, did you say?" I asked.

"Ex-actly," he replied.

"A contact lode, running across the cañon, north-west—south-east?" I continued.

"The same," he nodded affirmatively.

"Old workings run in from the cañon, and old adobe furnace by the stream?" I continued.

"The very description," he said. "I did not know any one else had seen it, though. I am going to corral the whole outfit for my syndicate."

"Are you really?" I said, adding, "Have you denounced it?" (The word "denounce" in Spanish-American countries in this sense means to claim.)

The Californian tapped his pocket significantly. "Got the

denouncement all made out," he said: "and that's why you see me so early. I am just riding down to the mining agents to put in the claim."

"How do you know the ground is free?" I asked.

He replied, and I seemed to trace a note of anxiety in his voice, that it had been free ten days ago, and he did not think any one had been "nosing around that cañon since."

"Well," I said, "I am sorry to cause you any disappointment, but I denounced the ground myself five days ago."

The Californian jumped up with a start, upsetting his cup of coffee in doing so, whilst my eye followed his hand to see if it took the direction of his hip-pocket—the usual repository of the western American's revolver! but there was no movement in that direction whatever. "I guess you ain't lyin'," was all he said.

For reply I reached out towards my leather steamer trunk—battered from much mule-borne journeying, and produced therefrom an official-looking document, sealed with the seal of the Mexican Republic, and laid it open before my perturbed guest. It was my own denouncement.

The Californian scanned it closely, and although his knowledge of Spanish was of the slimmest he knew its purport, and turned to the description of the location of the mine as set forth in the document. "I guess the drinks are on me," he said with native philosophy, adding that at least he was saved a twenty-mile ride, which was about the distance from the town and its corresponding mining agent. I reminded him of the adage about the sea and its contents, and furthermore gave him some particulars of a region not far off where there were some splendid copper "propositions" positively going begging. He departed with the intention of "heading that way," as he said, and I saw his figure presently crossing the sun-beat plain below.

Mexico is a remarkable country as regards mines. Throughout the enormous zone of the mineral-bearing regions 1,500 miles or more in length, there are innumerable old mines which have been worked by Spaniard and native at any time during the last four centuries. The metalliferous lodes or veins wherein these old workings are situated are legion in number; every hill, it is scarcely an exaggeration

to say, is crossed by them, and they contain such possibilities as might make the mouth of the London mining promoter or capitalist water, did he but understand it. But he does not. The London financier does not want to take up what he calls "prospect-holes"; he prefers to wait until some one else has taken them up and done some work on them, and then he is ready to pay a large sum for the mine so created. Doubtless the London financier knows what he is doing—sometimes. Mining, however, has—and justly in many cases—become discredited with the British public, who have put their hands so deeply in their pockets in the past and earned no dividends. In justice, however, to the bounty of Mother Earth, it must be stated that these losses have resulted, often, not from the lack of mineral in the ground but rather from financial machination and errors.

So far, kind reader, we have journeyed principally among the poor of Mexico, considering the "short and simple annals" of the peon inhabitants. But it has been my fortune in these picturesque countries of Spanish America to sojourn, not only in the hut of the peasant, with a saddle for a pillow, but equally in the palace of the governor and the home of the rich *hacendado*, or landowner. The hospitality of the Mexican people is well exemplified in the towns or haciendas more remote from the main routes of travel of the railways. The simple or pastoral virtues disappear generally before the advent of the iron horse, and the invasion of a country by an outside business element generally spells the farewell of kind and disinterested hospitality; that welcome which is extended to the traveller solely because he is a traveller and a stranger within the gates. But there are vast regions in Mexico yet where the snorting of the iron horse has never been heard; pretty towns where refined people live their unruffled lives much as they lived centuries ago. Here we shall see sweet, reserved damsels of oval face and raven tresses; their greatest dissipation the evening walk in the shady *plaza*, where the *naranjos* and the *platanos*—the orange trees and the elegant banana plants—lend their grateful shade and perfume; and their main distraction the hearing of daily mass in the picturesque church, whose Hispanic-colonial façade fronts upon the square. Believe me, good

reader, the Mexican damsel—as indeed the Spanish-American girl generally—is of womanly and attractive nature. She is, as regards sentiment, the antithesis of the girl of the United States. The flame of passion, when it is ignited in her, burns ardently and inextinguishably; it has the intensity of the Spanish united with the tenacity and constancy of the Indian. Indeed, love and marriage are the animating points of the Mexican girl's life; she knows nothing of woman's professions or woman's rights, nor desires any knowledge of such, deeming that to love and to be the mother of children is the proper aim and object of her existence and the purpose of Providence who made her. At present the advent of the business woman and the suffragette is not evident. There is a strain of fatalism in the Spanish-American woman which her vivacity at other times does but accentuate, and a tinge of unconscious melancholy. “Es la voluntad de Dios”—“It is God's will,” she says, resigning herself to events; and this is a strong feature equally of the lower class, or *peon* women. One result of this attribute is the non-existence among Spanish-American women—or at any rate so far—of the condition known as “race-suicide”; and the Mexican woman will not limit the number of her family. The ardent nature of the Mexican girl, and the easy regard of chastity on the part of the men of Mexico are responsible for the very large percentage of illegitimate births.

The people of Mexico form the most remarkable blending of races to be found in the New World. The various native tribes in Aztec times included among those the most barbarous and the most civilized of any American people: the bloody and treacherous scalp-hunting Apache and the wonderful Mayas and Toltecs with their stone-shaping arts were equally children of this strange soil. As to their conquerors, the Spaniards brought in their own wide range of European and African peoples, which had blended in Iberia; and the characteristics of Goth and Moor and Celtic, and of Aztec, Zapotec, Mayan and all others are visible to-day in type and character among the modern Mexicans. An Arab on his fiery steed comes along; the face of a Moor looks out from some *tienda* or shop, and a beautiful maid from Andalusia

trips, in high-heeled French shoes, along the pavement. That is to say, the Arab, the Moor and the Andalusian were the ancestors of these we are regarding.

Out of a total population of something under nineteen million souls, which is now estimated for Mexico, nearly fifty per cent. belong to the mixed race, which forms the typical Mexican nationality: the Spanish and the native fusion. From five to ten per cent. are of pure white race; whilst, more or less, forty per cent. are the count for the Indians, embodying the numerous tribes and divisions found all over the republic. The language of the country is, of course, Castellano, the Spanish of Castile, and the form of government is that of a federation of states, with elected deputies and senators. The laws of Mexico, like those of Spanish America generally, are excellent; but their lack of rigid enforcement is the weak point of their civilization. Of foreigners in Mexico there is a considerable floating and fixed population, Americans and Spaniards predominating, followed by British, German and French. Much political stability and material and commercial advancement has been made in Mexico under the continuous rule of President Diaz; and it is to be hoped that some progress in the social life of the lower classes will be evolved as time goes on. The Mexicans of the upper class aim at being a highly civilized people. The frequency with which titles or distinctions such as that of "Doctor" is encountered among them—degrees whether in science, law, medicine or the Church—show how their ideas run towards professions in which theoretical rather than practical considerations obtain. Military titles also are numerous, although there is a growing tendency towards a lessening of the importance of the profession of arms, and this is a favourable sign, denoting the passing of the old turbulent element which lived by the sword. Business in its higher branches is looked upon quite as a "respectable" occupation, and the profession of the priest is falling more into disfavour. The Mexican gentleman is generally wealthy, well (if somewhat superficially) educated, and his mien and garb are those of the European. Nevertheless the bull-fight and the lottery, those weaknesses of Spanish-American civilization, are still favourite forms of distraction. As I

once took part in a bull-fight, however, I will not animadvert here much on the palpable iniquity of the sport.

The young Mexican of the upper class is avid of gaiety and distraction; to be alone or to dine alone for him is unthinkable, or to be plunged in thought rare. He cannot understand the desire of the Englishman to be alone, or wrapped in his reserve, and always imagines that the solitary Briton must be unhappy. "Come and have a *copita* and hear some music, or fall in love a little with these pretty girls" (*enamorase*)—they will, in friendly banter, advise; and love, indeed, and its attendant matters bulk largely on their horizon. "Why!" one of my companions exhorted me on one occasion during my stay in a pretty little remote Spanish-built town of Mexico, "there is not a girl in the town who would not be ready to flirt with you"—(*llevarse con usted*) were his words; and, flattered as I might have been, I protested the exigencies of a more serious occupation. My friend, however—he was one of a number of young officers of the army who were quartered there—proceeded to unfold a plan for the evening's entertainment. "We are going to make a 'gayo,'" he said. "Come and take part in it!"

I thanked him uncompromisingly, and waited further explanation of this particular form of amusement. "We collect half-a-dozen boon companions," he said, "hire the town band, and fill our pockets with bottles of wine and beer. Then, about midnight, we set forth and visit in succession the houses of our girl-friends or sweethearts. There, outside in the street, the musicians touch their strings, and the happy individual whose *novia* or inamorata lives at that particular place stands without her window."

"And does she appear?" I asked innocently. The young men, most of whom were going to the "gayo" and were standing round, laughed at my question. "No, alas!" they said. "She does not appear. Lying upon her virgin couch she listens to the music, whilst her adorer, torn with passion, clutches the cruel bars which divide them."

I thanked them for the offer of this unique entertainment, but told them that my part in the affair would be without interest for them, as I was without a *novia*; to which they replied that that need be no obstacle, as they would under-

take to provide one for the occasion. I listened with amusement whilst they went over the list of Lolitas, Juanitas, Dolores, Teresas and others, discussing among themselves as to which would be the most appropriate. However, I compromised by promising to accompany them merely as a spectator, the amount of liquid refreshment to be partaken of to be decided solely by the judgment of the contracting party. This was a necessary proviso, as they love to press *copita* after *copita* upon each other, and profess offence if their exigencies are not complied with. With the detail of the night's diversion, kind reader, I will not weary you; suffice it to say that at the appointed hour we sallied forth, muffled in cloaks and *sombreros* to celebrate this custom of *seranata*, the leader of the expedition having first obtained the permission, as customary, of the municipal governor, or *jefe politico*. As a matter of fact the *jefe*, at a late hour, joined the expedition (leaving for the time his official dignity), and gave, under the stimulus of numerous applications of the sherry and cognac flask (terrible mixture), a song and dance in front of the house of a young lady whom he was supposed to regard with platonic affection. So hilarious did the serenaders become, and so industriously did the band strum and beat, that a stolid, white-clothed Indian policeman approached along the shadow of the trees towards us from his lonely vigil at the street corner. But the moon was bright; he soon recognized what was going on, and who was present, and he returned silently to his post. Very soon after this I slipped away unperceived, whilst the expedition proceeded to certain quarters which it would be impossible to mention within these chaste chronicles. I gained my own residence and was soon asleep; but some time after I was rudely aroused by a violent banging on the door of the house, followed by an appalling attempt at "Rule Britannia" by the band! They were finishing by serenading the *Inglés*!

The traveller in Spanish America will not fail to observe the structure of the towns of those countries, with their *plaza* or public square, tree-planted, and forming a happy promenade for young and old of both sexes, who walk regularly there and listen to the evening music. There is something about the arrangement of these cities, with the central pulse

of the plaza, and the streets radiating therefrom, and the public buildings and church surrounding it, which is pleasing and effective. It is a community-arrangement which is much more likely to make for civic civilization than the often dismal and centreless streets of an English town; and the Spanish-American plaza and its daily music might be adopted advantageously in Britain.

A notable feature of Spanish-American houses, to the traveller, is the colouring of the exterior in bright hues—ultramarine, pink, yellow, red, etc., the cornices being of one colour and the plinth of another, the walls being of one general tint with panelling or edges of colour. Whilst the effect might be described as gaudy, and would be anywhere else, it does not seem so here, and the simple plastered adobe structures gain in picturesqueness thereby, which the overhanging eaves, red-tiled roofs, grille-covered windows and balconies add to; and the narrow cobble-paved streets, leading down-hill suddenly, carry the eye far away to irrigated lands beyond, a stretch of desert, a far-off range of snow-capped hills perchance, all surmounted by the clear azure of an upland sky. Such are these habitations of the mediæval new world, as I have viewed them in a hundred towns, from Mexico to Bolivia and Peru.

The natural resources of Mexico are rich and varied, notwithstanding the considerable part of the country which presents itself to the traveller as arid or mountainous. The mountains, indeed, have given birth to the wealth in minerals, silver, gold, copper, lead, coal, mercury, petroleum, tin, etc., which have rendered the land famous in the past and are enriching it in the present; for mining forms the industry in Mexico, which yields the greater part of the country's revenue. But agriculture is the great natural mainstay of this, as of any other country; the eternal and living occupation of the great bulk of its inhabitants. It is to be recollected that Mexico is divided naturally into three great topographical and climatic zones. These are the *tierra caliente*, or hot lowlands, with a mean temperature of 77° to 80° F., going up to 105° F. at times, and extending up to some three thousand feet elevation above sea-level; the *tierra templada*, or temperate zone, 62° F. to 72° F., up to about

six thousand feet—which includes that agreeable region often described as “perpetual spring”; and the *tierra fria*, or cold zone, upwards therefrom. The largest part of the country is included in the second category, but the valley and city of Mexico, as well as a large part of the plateau and the important cities situated thereon are within the *tierra fria*, and are subject to a bracing climate with cold nights. Indeed cold, rather than heat, will be experienced in the principal industrial centres, or rather very sudden diurnal changes of both, whilst among the mines generally the climate is often bitterly cold at night.

This marked diurnal change was very forcibly brought home to me on one occasion during an expedition to examine some gold mines in the state of Zacatecas. I had ridden all day, fifty miles or more under a burning sun across absolutely sterile plains and barren hills, and as evening fell my guide conducted me into a narrow cañon, where, much to our disgust, there were no human habitations save some mouldering adobe walls. However, the mules were tethered upon a friendly patch of herbage which grew near by, a fire was lighted and tea made, and, refreshed thereby, I took stock of the surroundings. There were the ancient mine-mouths above us on the hillside, with great masses of quartz and pyrites strewing the slope and the floor of the cañon, after the manner of such places generally. I was thinly clad in a white drill riding-suit, and before long the rapid change of temperature consequent upon the setting of the sun—the elevation was about eight thousand feet above sea-level—was felt, and the cold pierced keenly through these habiliments. I had only brought one blanket, or poncho, and my *arriero*, or mule-driver guide, and my servant only carried one apiece, after the habit of these people in travelling. So cold did it become at length that our teeth chattered. “Would not the señor prefer to sleep in the mine?” asked the *arriero*, who, in addition to his present occupation, was also a miner, with a knowledge of the place. It was a good suggestion, for—as he had informed me would be the case—the interior of the mine was as warm as an oven, and there our couches were arranged with some armfuls of dried grass, a short distance within the mouth of an adit-level. There, except for an

occasional bat which flew past me from the grim depths of the mine below me, fanning my face with its wings, I slept excellently until morning.

In general terms the climate of Mexico is to be considered good. Notwithstanding that the country lies towards the equator, south of the United States, the high elevation offsets the heat of the torrid zone—except, of course, upon the coast—a fact which has long since been discovered by the tourists of New York or Chicago, who journey to Mexico in Pullman car-loads, to escape the terrible moist midsummer heat of their own cities. Indeed, the equable, dry and invigorating climate of the Mexican uplands is one of the country's finest characteristics; and the region of its coniferous forests on the higher mountain slopes form veritable sanatoria. Similarly may the American of the north winter in Mexico to avoid the Arctic cold of New York; for four or five days' railway journey takes him there.

As to the rainfall it varies greatly in different parts of the country, although it is confined to a rainy season, from May to November approximately. From 25 inches annually in the capital the fall ascends in certain places, as at Monterey, five hundred miles nearer the United States border, to 130 inches, whilst on the Isthmus of Tehuantepec, to the south, it reaches 156 inches; falling, on the northern part of the Pacific Coast to *nil*. Snow falls in the higher ranges of mountains at times and very rarely on the plateau, but I have experienced such, and the unfortunate *peon*, with his sandalled feet and thin white *manta* clothing (*manta* is a native or imported calico), looks, while it lasts, the picture of dejection.

The "cloudbursts" in the mountains of the plateau region are at times terrific. Indeed, throughout the arid region of Western America generally, such as Arizona, California, Texas and Mexico, the sub-tropical rainstorms break over the land often with sudden fury, washing away miles of railway embankment, leaving festoons of rails and sleepers supported on the naked abutments of bridges, and scoring out the countryside with deep cañons and *arroyos*. On the Mexican plateau there are great areas known as "bolsones," where fine alluvial soil, hundreds of feet deep—the work of

the elements through ages of erosions; and the arid plains of these tracts are sometimes scarred out for a hundred feet in depth by the action of successive cloud-bursts. The gullies thus created are like huge canals, and when a storm breaks in the mountains a terrific spate of water comes hurtling down them, bearing along the trunks of trees, bodies of animals, and even men, and other flotsam and jetsam. It befell me on one occasion to be journeying along the bottom of one of these dry gullies which traversed the desert some hundred feet below the surface of the ground, for these bottoms afford easy going, often, for the horseman. My man had lagged behind to converse with (and doubtless to take various *copitas* with) a *compadre* whom he had chanced to meet, who was going in the opposite direction. I rode on, buried in thought—a brown study which nearly cost me dear. A dull, distant roaring had fallen on my ears, but I had scarcely taken notice of it until it got louder and claimed my attention: a singular noise which I could not explain. True, it seemed that over the direction of the distant hills a black sky hung, but the noise was not like the noise of thunder. The horse, moreover, was uneasy, and continually pricked up his ears as if perturbed by some sense of impending danger, in the eloquent fashion in which the equine expresses his frame of mind by ear-movement. The noise got louder and nearer. It sounded like a thousand bulls tearing over a plain—the sound of a cattle stampede. What could it be? I could not explain, but decided I would ascend the side of the *arroyo* to the plain above. Easier said than done; for looking about to find a means of ascent the banks, I saw, were almost vertical and of a friable soil which offered no foothold. However, a little farther along a place presented itself which it seemed might be possible of ascent, and as I stood for a moment thinking of essaying it I heard a shout, and observed my man tearing along the edge of the *barranca* or bank above me. “Señor, una ola, una ola”—“a wave, a wave!” he shouted. A wave! what on earth did he mean? But his meaning was rendered plain in an instant. The *arroyo* or gully stretched straight in front of me for a thousand feet or more to where it curved; and as I looked along it I saw a crest of foam, ten or twelve feet high,

sweeping down upon me, and quickly understood what it was. There had been a storm in the mountains far away, and this spate was the result.

The herculean efforts I made to get up the side of that infernal gully were such as were inspired by the imminent danger of disaster. Dismounting with the quickness of thought I took the end of the long bridle and essayed to clamber up the yielding precipice dragging the horse. Useless: the animal pulled back, and I felt that I must abandon him, for the spate was close upon us now, swirling down the gully from wall to wall in a foaming flood. Cursing the blind obstinacy of the brute but loath to lose him, I descended again, and getting behind him thrashed him with my riding-whip. He made a leap forward, rolled over, regained his feet, and in a cloud of earth and dust scrambled up the side of the precipice to the verge where my servant stood. The man did not cease his exhortation to me to ascend, but exhortations were useless—my life depended upon myself. For down had come the turgid stream which ran in front of the wave, washing away the earth from beneath my feet, whilst the soil brought down by the horse had practically blocked up the means of ascent. But I accomplished it, or I should not have survived to tell the tale. A friendly stump of *mesquite* and the arm of a thorny cactus—it mattered not what—lent insecure hold, and scrambling thence I reached the end of the *riata*, or lasso, which my man had lowered, and so regained the surface of the plain just as the wave roared past below me.

The Andine structure of Mexico has given origin to basins or depressions in the plateau región, which have no hydrographic outlet; and of such a nature is the *Bolson* of Mapimi, in which the river Nazas—a considerable stream rising in the Western Sierra Madre, has its terminus, falling into the lagoon of Parras, where its flood waters become exhausted by evaporation. This river is a miniature Nile, as regards its great value for irrigation; and the numerous canals which conduct water to the great cotton plantations of the Laguna region exhaust the normal flow of its waters. A great deal of wealth has been made here, and millionaire cotton-planters have grown to being in this region—wealth due to

the waters of the Nazas. The regimen of this torrential river is peculiar in the dry season, its bed being absolutely dry; when after a cloudburst such as heralds the rainy season a spate of water such as I have described comes down and fills the bed from shore to shore, three hundred feet or more, with a turbid torrent. I have often been under the necessity of fording this stream on horseback, the horse swimming and wading, to gain the opposite bank.

Another example of a hydrographic entity is the valley of Mexico and its lakes, which have always been subject to floods, even during the Aztec period and the time of Cortes and the viceroys, which latter governors endeavoured to establish drainage works. Now, however, the valley enjoys an outlet for its flood waters—the famous drainage canal and tunnel, built by a British firm, rendering the valley and capital secure from inundations, and by reason of the subsoil drainage making it far healthier. The lakes of the valley of Mexico were, in a former geological epoch, probably associated with the great lake of Chapala and others, which discharge into the Santiago River, one of Mexico's main fluvial arteries, with a debouchure upon the Pacific Coast near San Blas. Northward of this is Colima, whose volcano lighted up the darkening landscape as I journeyed towards it, and flung its murky smoke-coils against the colours which lingered over the west, what time the sun-god of the Aztecs sank towards the Great Pacific Coast.

The various topographical and climatic zones of Mexico give rise to a wide range of species in the vegetable world. Upon the coast zones, both of the Atlantic and the Pacific, we have, as native or cultivated products, of a tropical or semi-tropical nature, rubber, tobacco, bananas, chocolate, henequen, or sisal hemp, rice, cocoanuts, sugar-cane, oranges, and a wide range of native fruits; whilst of timber the characteristic species of these regions, including mahogany and hard woods, abound; and the enormous cypresses or *ahuahuetes*. Upwards from the lowland zone we encounter as cultivated products grapes, maize, coffee, sugar-cane, and the important *maguey*, which also extends into the colder regions. This well-known cactus is, in some respects, one of the most valued native products, yielding as it does

the national beverage of pulque, with a variety of uses in addition. Ranging upwards from these regions are great areas of land given over to cattle-grazing and extensive coniferous forests, which latter, whilst they have been wastefully denuded in places, still form one of the marked features of the mountain slopes towards the Pacific and the Atlantic. Chief among the products of agriculture are maize, cotton and sugar-cane, and the maguey; whilst the hemp of Yucatan yields fortunes to its planters: the whole annual value of the agricultural productions of the country being in the neighbourhood of twenty-eight million sterling. Nevertheless agriculture is still backward. Crops depend entirely upon irrigation—a condition, however, which ensures stability and regularity, and numerous important works for water-storage are being built or contemplated. Improved methods and a better organization of the land and the labour are essential to the country's advancement; the condition of the great bulk of the agricultural labourers, or *peons*, being little more than that of landless serfs under a "truck" system, and this, whilst it has received some benignant attention from the Government, calls urgently for betterment. The white-clad, humble, long-suffering *peons*, whom I have constantly employed, have good and useful characteristics; they do all the work of the land, and have always impressed me with their latent capabilities. Class-ridden and priest-ridden, they are naturally backward, but no thoughtful observer would wish to see them divorced from the land, or turned into overalled mechanics, town-bred strikers, or other elements of modern commercialism, such as their northern neighbour, the United States, brings forth as the main human product of her civilization. Is it inevitable that a country, in passing from primitive conditions of pastoral life, must traverse the unlovely phases which the manufacturing nations of the world are at present exhibiting; or shall it be given, perchance, to the Spanish-American people to evolve along other lines? For Mexico's pastoral simplicity contains much of beauty and native refinement, which falls upon the traveller's senses like some grateful balsam, after the aggressive and material-minded communities of Anglo-Saxon North America. Do not let us despise, kind reader, the patient

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peon, as, with hat in hand, he gives us his respectfully courteous, "Buenos dias"; nor despise his saints, his crosses, and the temples he raises on every hill. They contain more than the thoughtless tourist may imagine, and nature has preserved him and his ways for some object of her own—possibly purposing that the blatant civilization of Anglo-Saxondom shall not swamp her continents of the New World in their entirety.

Most important as regards wealth produced is Mexico's mining, as before observed. A metalliferous zone crosses her whole territory, a zone more than 1,500 miles long and extending in breadth across her wide mountain belt. Here are clustered the historic mines which have made Mexico's name a by-word in the annals of silver and gold. Well might Cortes have written to King Carlos V that, in his judgment, everything that Solomon brought for his temple might exist here: a letter which was the prelude to the draining of Mexico's wealth of silver for needy Spain—that insatiable "sieve" through whose meshes the minerals of New Spain and of Peru flowed for three hundred years. Now Zacatecas, Pachuca, Guanajuato—household names in mining; Sonora, Chihuahua, and a host of others, ranging from the northern boundary of the country to its southern end, all tell hopeful and profitable tale to the miners (including British and American shareholders whose funds are invested there). Nor are the precious metals alone those which Mexico is giving to the world, for, rising from a production in copper of *nil* fifteen years ago, the country now ranks second in the world's output; whilst her coal and petroleum industries are also coming forward. The growing importance of Mexico's mineral industry may be gathered from its annual value of fifteen million sterling. The field for the miner and the capitalist is an alluring one, as I have elsewhere averred. As a manufacturing nation Mexico has made some progress of recent years; and her coalfields, water-power, and wealth of raw material may, in the hands of the enterprising foreign element which is invading and teaching her, give her an important place as makers and exporters of things which mankind wants.

The civilization, people, architecture, customs, social con-

ditions of Mexico are the very antithesis of those of the land beyond the Rio Grande: the Anglo-American world of the United States. To cross the international bridge at El Paso, or other frontier town, is to transfer ourselves from the Middle Ages to the twentieth century, or *vice versâ*. It is to leave a pastoral community where the greed of modern commercial life is little known, and to enter upon the aggressive struggle of the wonderful commercial age of the United States. The distinctive character of the cities of Mexico is, of course, inherited from Spain. Guadalajara, Durango, Chihuahua, Puebla; even the lesser towns and villages will delight us with their old-world Hispanic character; their quaint streets and buildings; their innumerable churches; their plazas, colonnades, alamedas, and other features of this refined and idealistic people. Remote from routes of travel we come upon small towns and villages whose air of antiquity and simplicity convey a charm which we shall never feel in an American beyond the Rio Grande. Here are orange-bowered and sequestered haciendas; old stone-arched aqueducts, buildings of solid and antique masonry which, defying the centuries, do but take on from the lapse of time an added dignity and charm. Here are remote and peaceful dwellings where, tired of the whirring of the wheels of commerce of the north, we might linger our days away, were we not active Britons and imperialists.

There are other chapters of Mexico—the wonderful chapter in stone of her ancient history—which inevitably refer the mind to the question of the origin and advent of the American peoples. It would be beyond the province of this book to enter into these at much detail, and I may refer the reader to another work of mine dealing therewith.¹ The beautiful examples of the stone-shaping and pyramid-building arts of the Toltecs, the Mayas, the Aztecs and others who successively or contemporaneously inhabited the country, which exist to-day, arouse the admiration of the traveller. The palaces of Yucatan, the halls and monoliths of Mitla; the pyramids and teocallis of Teotihuacan—all are of such singular and unique interest as may well have attracted the attention of archæologists of renown. There they stand, those

¹ *Mexico: Its Ancient and Modern Civilizations, etc.*

PREHISTORIC MEXICO

MAYA PYRAMID AND TEMPLE AT CHICHEN-YTZA,
IN YUCATAN.

PART OF THE RUINS OF MITLA.

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beautiful, ruined structures; mute witnesses to the skill of a people who came from out of the shadow of an unknown history: cut off at a blow by the advent of the European.

Mexico, then, through whose broad territory we have taken this flight, is a land of transition. Her geography and her geology are connecting elements between two continents; her flora and fauna—the former, due to her varied zones, including species from the polar circle to the equator—are of both North and South America; whilst as to her people and her civilization they are the link between the Anglo-American and the Spanish-American civilizations, and the field upon which a marked fusion of life and ideas may be destined to be held.

Mexico has remained upon my memory as a land and people of promise; among its main impressions are those of azure skies, tree-crowned mountains, long shimmering expanses of sun-beat desert—deserts of peaceful and satisfying sterility where the wind bloweth where it listeth, where the mirage comes and goes, and where nature's distinctive desert-voice falls on the ear of the traveller who can hear it. And I have impressions of a courteous people and the sound of military fanfare and the gleam of gold lace, all backed by a field of white-calico-clad and red-blanketed, melancholy *peons*; of bright glances from coquettish eyes; of oval faces which have looked forth from behind the iron grilles of their windows or down coquettishly from balconies above; of gentle hand-pressures and stolen glances. Again arises a picture of caparisoned steeds and desert trails, of bull-fights, savagery and bloodshed; of untold wealth in virgin rocks; of a perpetual summerland, and of that spirit and atmosphere, in brief, which has led me to term Mexico, even in the twentieth century, the Land of Romance.

V

CALIFORNIA : THE LAND OF GOLD

As we cross the Sierra Nevada, the great snowy mountain range of Western North America, and descend its western slope, we obtain glimpses of valleys far below the curves and spirals of the railway over which we are speeding. Seen almost from among the snows and the precipices of these high summits, are cultivated vales lying in the glamour of distance, with brimming irrigation canals, conducting life-giving streams of water from mountain torrents to the thirsty lands of fruit- and grain-growing ranches. The cool water and abundance of vegetation form an exceedingly restful change to the eyes of the traveller, who has been choked with the silting alkaline dust and bored with the monotony of the sand and sage brush deserts over which he has passed in the region of the Great Salt Lake to the east—the arid wastes of the Great American Desert—before his Pullman-car ascended the forest-clad mountains. The water-parting is crossed; below lies the great central valley, and beyond it is the coast range and the Pacific Ocean. It is California. Thus I first beheld it: thus it opens its gates as we approach it from the east.

There is something of allurements about this well-known and fantastic name¹ and the splendid country which bears it. Across these stern mountains and along these deep cañons the first path-finders from the new nation of the United States groped their way to find a highway to the sea a hundred years ago, to dispute dominion with the British fur-traders. Along that surf-beat ocean coast sailed Drake, the abhorred of Spanish viceroys, and other stalwart British buccaneers, four centuries ago. Into those river-bars,

¹ California is a name taken either from an old Spanish romance, or else from the Latin words *Calida Formax*, or “hot furnace”: applied by Cortes.

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gulches, creeks and valleys poured the horde of gold-seekers to win the yellow metal whose fame carried the name of California to the ends of the earth. Those were "the days of old, the days of gold, the days of '49." Along those sunny foothills and sequestered vales the gentle Spanish missionaries built their picturesque adobe and red-tile-roofed mission-houses, and planted the vine and the fig-tree, years before the enterprising Anglo-Saxon, discovering that irrigating water poured upon the desert yielded a fortune, planted his orange-groves and vineyards to supply the fruit-markets of the world.

The most striking conditions about California to the foreigner, and indeed to the American of trans-Rocky Mountain nativity, is its beautiful scenery and climate, and the strong hold that Spanish nomenclature has retained upon the topography of the State. The soft-sounding Spanish names are in pleasing contrast with the harsher sounds of the places of "the East," as the American terms the older settled part of the United States. A people who, as the Spaniards, named their rivers and hills and villages after the saints and other things of the abstract rather than the material world, have rendered a service to the land which time will not banish; and the wonderful vitality and sense of individuality of the Spanish race (which had penetrated through those boundless Cordilleras and forests of South America and Mexico) is stamped upon the land and map of California—subtly but indelibly. The busy American who lives there to-day, and whose it is, thinks little of this, but it has influenced him more than he may often recollect or admit.

There are two main entrance ways into the Golden State, as the Californians love to term their country—a not unjustifiable nomenclature having in view its stores of metallic gold, its yellow oranges, its remarkable natural fields of poppies, and its sunsets. The first of these is the overland route of the railways from the East, notably the Great Southern Pacific Railroad, which climbs and pierces the Sierra Nevadas at a maximum elevation above sea-level of 8,250 feet. It was a stupendous feat to cross these snowy mountains with a railway, and the forty miles of snowsheds over

the summits through which the line runs in winter, attest the dread and power of avalanches. Over the top of these extraordinary structures of solid baulks of timber, the snow-slides pass more or less harmlessly; wooden tunnels, however, in which the view of the magnificent scenery is largely lost. But the front and natural door to California, although, perhaps, less travelled than the mountain staircase, is the famous Golden Gate, that singular cleft in the coast range which gives access and outlet to the inland sea of the Bay of California. This bay forms a land-locked harbour in which all the navies of the world might swing at anchor, and where, indeed, the merchant flags of all nations are to be seen.

The topographical configuration of California may be said to obey the general Andine structure of the Great Pacific littoral of the Americas, shown throughout Mexico, Peru and Chile, as before demonstrated. We have the paralleling Cordilleras and their longitudinal valleys and rivers, with the general north-north-west to south-south-east trend, as in Mexico and Peru; with the marked topographical division of coast zone and mountain zone, and their corresponding varying conditions of climate, temperature and vegetation. The dominating natural features of California are: first, the two great mountain ranges—the Coast Range and the Sierra Nevada, divided by the great Central Valley. These two ranges are joined, in places, after the general Andine fashion, by counterforts (known in Peru and Ecuador as *nudos*, or “knots”). There is one very notable difference, however, between the Cordilleras of North America and the Andes of South America—the former are covered with forests, whilst the latter are absolutely treeless. The two connecting counterforts of California are Mount Shasta, in the north, a great snow-clad uplift, and the Tehachapi cross-range in the south. North of this Tehachapi barrier the country is known as California simply, or Northern California; below it the invariable name of Southern California is applied to it: not to be confounded, however, with Lower California, which is part of the neighbouring republic of Mexico.

The great Central Valley of California is uniquely drained

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by two rivers, one, the Sacramento, coming from the north, and the other, the San Joaquin, from the south. These two great streams have their confluence to the east of San Francisco Bay, into which their joint waters empty, debouching thence with the ebb and flow of the tide through the Golden Gate into the Pacific Ocean.

The colossal Sierra Nevada bounding California on the east is not, however, the *divortia aquarum* of the North American continent. The vast region beyond it, comprised between the Sierra Nevadas and the Rocky Mountains, including the states of Nevada, Utah, Colorado and Arizona—once known as the Great American Desert—is drained by the Colorado River and its tributaries, which empties into the head of the Gulf of California in Mexico, and so belongs to the Pacific watershed.

This great elliptical-shaped fertile valley of California is some four hundred miles long and varies from thirty to sixty miles wide, the outlet to the streams and rivers draining it being that of the bay and the Golden Gate. The coast range of California is from two thousand to eight thousand feet in elevation, and consists of innumerable ridges, spurs and lesser ranges, generally forest-covered, and enclosing many smaller valleys; some forming forest-clad avenues extending to the sea; others opening on to the Great Central Valley. From the summits of some of these hills fine panoramas are spread to the view. To the east we behold the Great Central Valley, with the San Joaquin and Sacramento rivers giving life to its towns and orchards, dotted sparsely upon the great fertile tract, with patches of forest and desert. Beyond the valley is the great Sierra Nevada; and the beauty of the winter snow-fields, whilst less stupendous than those of the South American Andes, are of enduring recollection.

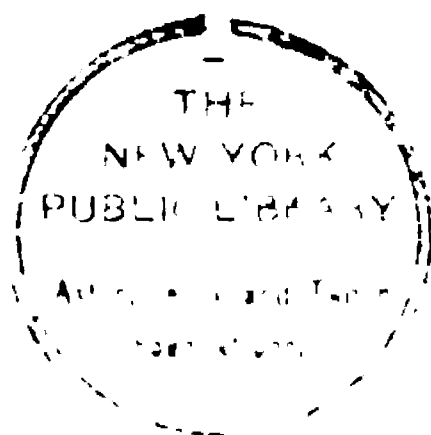
The Sierra Nevada is some five hundred miles in length, and its summits rise from ten thousand to fifteen thousand feet above sea-level. Profound cañons—the work of bygone glacier-ages—from two thousand to five thousand feet deep scar the flanks of this great chain. Savage and almost appalling in its grandeur in places is the wild region of the Sierra; yet it gives place to some of the softest and most beautiful landscape to be beheld in any part of the Americas. In a

day's march Nature spreads us her most varied scenes—from park-like vale to roaring torrent and glacier-bound peak. Here is the famous Yosemite Valley, with those sheer, towering cañon walls which mark it out from all other gorges of the world: here are the unique spots where giant trees are found, such giants as only California produces. Where else shall we find trees whose seed sprouted in the time of Abraham or the pyramid builders? Here, near Yosemite, stands among its forest brethren the Grizzly Giant, approaching its maturity, experts say, after three thousand years of life; while among the great Sequoias are trees whose age is estimated at eight thousand years!

Down the western flanks of the Sierra Nevada numerous streams and rivers flow from sierra snows, to join the Sacramento or San Joaquin rivers. Seen from afar the snowy belt of the mountain summits contrasts strongly with the purple zone which marks the forest dominion; and still below are the foothills where the miners sought their gold, and where the fruit-growers have formed their vineyards and orchards, rich with the essence of orange, vine and fig-tree, and watered by brimming ditches or canals from the cañon streams. This mountain region of California, with its snowy peaks, great forests of sombre pine, numerous lakes, streams and meadows forming natural parks, is of alluring beauty. Nature has smiled upon it and made it so diversified and grand and yet accessible, especially in comparison with the untrodden wilds of the Andes and the Amazon of the South American continent, that it should be marked out—as indeed it is—for all lovers of Nature in her stupendous moods. I have dwelt for months in a leaky hut of boards within these wilds, and counted the time well lost.

Turning our gaze now from the east towards the west we have, spread out before us, the foothills of the coast range; the narrow sandy strip along the ocean verge, and then the Pacific with its distant sea-line. There the sun dips and leaves its scarlet after-glow, and the westerly wind strikes refreshingly upon us after the heat of the day. At other seasons, however, the wind is excessively chilling, and brings a dreary bank of sodden mist from the sea, blotting out the whole landscape and, if we are not careful, leaving us grop-

ROCK FORMATIONS IN THE YOSEMITE VALLEY



ing benightedly among the slopes and cañons of the hills. So it befell me once on Mount Tamalpais, for the sea-fog rolled up and obscured everything within a radius of a hundred feet, rendering the descent impossible.

The great culminating points of the Californian sierra are Mount Shasta in the north and Mount Whitney in the south—separated by four hundred miles of rugged chain. Shasta is a volcanic cone of imposing aspect, rising to an elevation above sea-level of 14,440 feet; and it forms a natural monument for the surrounding region for a hundred miles away. To the northward the sierra forms crests, which from summit to foot are lava-covered, and the old volcano mouths on its flanks show the past activity of its subterranean fires.

Shasta's snow-crowned uplift gives rise to numerous streams and rivers born of the melting snows and thawing glaciers, perhaps influenced by internal heat. Here the romantic Sacramento River rises, flowing down the Great Central Valley for 250 miles to its confluence with the San Joaquin. The snow-cap on Shasta looms weirdly and beautifully up under certain conditions of the atmosphere, seeming to float upon some mystic haze of vapour, after the manner of the snow-capped peaks of Cordillera-regions generally. The largest of Shasta's five glaciers is three miles long, and it descends to within an elevation of 9,500 feet above sea-level, the lowest in the whole of the sierra; for the average elevation of the lower edge of the Californian glaciers is about eleven thousand feet. Much of the beauty of Shasta is due to its isolation, and indeed others of these ice-capped peaks of the Sierra Nevada of California and Oregon stand similarly alone, rising from dark belts of pine and firs, which afford added contrast of light and shade. Also, these snowy mountains of the Americas—whether of California or of Peru—have an added element of beauty in that their gleaming crests are reared into a sky generally blue and cloudless, and, in that respect, have some superiority to the Alpine attractions of Europe. The snows of Shasta, however, diminish greatly in summer, due to the heat of the sun.

Mount Whitney, the peak of greatest altitude of the Californian sierras and their culminating point at the south, reaches an elevation above sea-level of 14,522 feet, with a

helmet-shaped crest forming one of the highest points in the United States. Other lofty peaks arise in the group of which Mount Whitney is the monarch, such as Mount Gardner, Mount King, Mount Tyndall, Mount Brewer, Mount Jordan and the Kaweah peak, most of which are over fourteen thousand feet high. Between the Shasta and Whitney peaks there are ten or more handsome culminating points along the crest of the Sierra Nevada, more than thirteen or fourteen thousand feet in elevation. Among them is Mount Ritter, 13,300 feet, an almost inaccessible mountain surrounded by steep glaciers and profound cañons. The whole series forms a striking work of mountain sculpture, and may well be termed the Californian Alps.

California, especially in the northern part, has in past geological epochs, been greatly altered by volcanic agencies. Mount Shasta must have been formed by successive eruptions, alternating with long periods of quiescence, during which the flow of hot lavas ceased and the work of the glaciers succeeded them in the shaping of the sierras. How long it may be before fresh devastating fires are poured forth it is impossible to say; but doubtless it must occur! The snow and ice age in the sierras markedly performed the work for California of disintegrating the mountains and filling up the valleys with fertile soil, the source of her greatest wealth to-day. The traces of glacier action are very marked as far south as the 36th parallel, but there are no glaciers in that latitude now, and Mount Whitney is practically without perpetual snow. Mount Tyndall, however, which is in the latitude of San Francisco, is glacier-bound, whilst between 36° and 40° numerous glaciers exist. It is contended, however, that they are diminishing.

The snow-fall in the sierras, over a belt of thirty miles wide, is excessively severe in winter, as evidenced by the ponderous snow-sheds on the railways, and averages ten to fifteen feet deep. The Union Pacific Line has forty miles of these sheds, whilst that striking monster, the rotary snow-plough, locomotive-driven, is in constant requisition in what is an everlasting fight between man and Nature to keep open a way over these inclement passes. In summer these costly wooden structures are menaced by fire, whether from sparks

from the locomotive, or whether from forest fires or accidental or intentional conflagrations from the camp-fires of railway tramps. "What are you stopping here for?" I asked the conductor of the Pullman-car, as the train pulled up at one of the openings in the snow-sheds. He replied that they were taking a tramp on board; for there is a standing order to give these gentry free passage through the sheds!

Whilst tramps are taken on board here as a measure of safety, they are more generally put off the train elsewhere; for it is the commonest occurrence for impecunious passengers to attempt to beat their way without a ticket. Along comes the conductor—a somewhat autocratic individual on an American train—down the car to examine the tickets. This is not as simple a matter as might be supposed, for if you have come from New York your ticket may be about a yard long, pieces of it being taken off as various divisions of the journey are passed. But, in addition to that, tickets are issued not only by railway officials but by "brokers" in all American cities, agents who sell unused tickets at a considerable reduction, and these may or may not pass muster. Often they do not, or are barefacedly useless, and the impecunious passenger has no funds to make good with. The conductor looks black; there is a short wordy altercation; the official's hand goes up to the signal-cord running along the aisle of the carriage, and there is a short answering toot of the locomotive's syren. Then the train comes to a standstill—no matter if it be in the midst of an appalling sand-and-sage-brush desert a day's journey from anywhere; the unfortunate "deadhead" is assisted off the platform—or "fired" off (that is, thrown off, in Western parlance)—and left there, a disconsolate figure on the track across the wilderness. I recollect the first time I witnessed this performance it worked upon my feelings, and as the train was starting I bargained with the conductor for the amount of the required fare, paid it, and the unfortunate but probably culpable passenger continued his journey. This "tender-foot" proceeding of mine aroused much interest and comment among the passengers in the car, both for and against the Britisher who had performed it; and it must be admitted that, carried into general practice, it would be somewhat

severe on the pocket! There is yet another unconventional method of journeying over these transcontinental railways, especially by those enterprising tramps who love to winter in California instead of New York. This consists of getting underneath the train and hanging on by the chains or coupling bars, holding on in this way for hundreds of miles. I have seen tramps emerge from beneath the train at some wayside desert station so covered with dust that they were scarcely recognizable as human beings; and in some cases they fall off from exhaustion *en route* and are destroyed by the wheels. Such is the strenuous life!

But returning to the snowy sierras. The traveller who sojourns among the mountain peaks of the American Cordilleras, whether in California or Peru, will observe a curious phenomenon at times. This is the occurrence of "snow-banners." The snow, pulverized into a dry dust by the wind and frost, is blown off the high slopes and peaks in streamers or banners, flying out into the air, or upwards, in a singular and beautiful fashion, like a streaming white veil floating upon the wind, flung against an azure sky, and seemingly attached to the summit of the peak, like the chiffon "suivez-moi" of a lady's dress. At times dense and opaque at the point of attachment, it trails gradually off to a pennant-point of translucent texture, reaching in some cases from peak to peak across wide intervening spaces.

The passes over the Californian Sierra, whilst they do not reach the great height of those of the Cordilleras of South America, are nevertheless of great altitude and often of difficult passage; and, indeed, the Californian Pacific slope is cut off from the rest of America by this great range of the Snowy Sierra. Many of these passes are mere trails, scarcely practicable for mules, at elevations above sea-level of nine thousand feet to twelve thousand feet. Others are crossed by excellent wagon roads, however. Some of these trails were first made during the time of the excitement attending the discovery of gold—made by men who, to win the coveted yellow metal, would have made trails into the Bottomless Pit, could they have obtained gold by so doing! Towards these snowy ranges and their peaks and passes in those exciting times the way-worn emigrants with their battered

wagons directed their weary steps as they crossed the burning plains of the deserts to the east. The ramparts of the land of gold loomed up before their eyes, and footsore with their thousand-mile journeying, and aged with constant vigilance of Indian peril, thirst and hunger, they hailed with delight what seemed to them the gates of a promised land. It was towards the northern part of the sierra, however—the Oregon trail—that these pioneers directed their way, in order to cross the range by the lower passes encountered there, practicable for vehicles. The Mono Pass, 10,760 feet elevation, is occasionally used by adventurous tourists, but principally by the Pah Ute Indians, who cross it to obtain supplies of acorns from the forests, or to hunt the deer.

The romance of crossing the plains remained long in the traditions of California. The man who “came over the plains in ’49” has only recently disappeared, and his following generation still retains recollection of that strenuous genesis and exodus of his progenitors. Most travellers in Western America to-day have heard the yarns of ancient “fossickers,” old prospectors and others; old “forty-niners,” who, in hotel parlours and elsewhere, have loved to fight their battles over again. There is the story of a strenuous and tragic journey which we have heard in Western America—humorous but terrible. A cavalcade of wagons and settlers was making its way westward towards the Rocky Mountains in early days, and some ardent spirit among the rugged crew of pioneers had inscribed on the white cover of his wagon, with the singular humour characteristic of the time and the people, the words, in large letters—

“PIKES PEAK OR BUST!”

Pike’s Peak is a famous point of the Rocky Mountains, and “bust,” it is hardly necessary to explain, is a strenuous rendering of “burst”; and the whole axiom was intended to breathe unconquerable determination. Well, the caravan went forth into the great plains; forth into those great deserts, where the abominable Apaches and other Indians roamed, upon its way to the Golden West. It set forth, but not a soul of that caravan was ever seen alive again! The only evidence of its fate given to the party which set

out in search of it was the wreck of the wagons and burnt goods, and other signs—terrible evidences well known to frontiersmen—showing that the caravan had been overwhelmed by Indians and the people scalped, tortured and killed. Among the wreckage was seen, still intact, the wagon with its white cover, upon which the legend before-mentioned was inscribed; but in addition there now appeared other words—

**“PIKES PEAK OR BUST
BUSTED BY GOD”**

The last words bore evidence of having been written in haste. I will not vouch for the truth of this story exactly, but it is illustrative of actual occurrence.

As to the perils and discomforts of the journeys of those old pioneers during the time of the “Great Migration” and the “Oregon fever,” we can at least form some idea from the appearance of the sand-and-sage-brush wilderness, which, day after day, the railway traverses to reach California. Notwithstanding the double windows of the car, and the closed ventilators, as we cross the alkali deserts around the Great Salt Lake the fine white dust silts into the carriage and covers everything with an impalpable flour—clothes, seats and baggage; whilst the heat is almost overpowering. The awful stony desert, the gaunt cactuses, stretching out their ghostly arms, and the shadowy forms of the coyotes seen from the windows of the train as it jogs along, remain imprinted upon the traveller’s mind long afterwards. What, then, were the experiences of the pioneers who followed this portion of the old trails when they went “over the plains in ’49”!

As before stated, the main feature of Californian topography is the great central basin known as the San Joaquin Valley. The two rivers which drain it, the Sacramento and San Joaquin, are fed by a large number of rivers and streams which descend from the Sierra. These tributaries begin to rise in the spring and are flooded by the melting snows. In the northern part of the country the rapid rise of the water is not so prevalent as in the southern part, due to the fact that the thawing snow and glaciers discharge their water upon

the folds of the porous lava sheets, which retain it and yield it up, to some extent, as a more regulated flow. Especially is this the case in the region around Shasta, the water being vomited forth from deep tunnels in the lava folds; and a huge spring of this character, more than seventy yards wide, forms the source of the McCloud River. Indeed, various rivers in California are, so to speak, born full-sized into the world in this way. The forests also, by reason of their shade and the retaining power of the snow, serve somewhat as natural regulators. Nevertheless, the storms and floods in these wild regions are at times terrific. I have braved them in solitary expeditions upon the high sierras and felt their force.

These rivers and lava sheets of California, bygone and present, are of much interest. The "dead" rivers of California have become famous in the annals of the metallurgy of gold; and these Tertiary streams were but a former generation of the great streams existing to-day. Yet the ancient channels, with their rich gold-bearing gravel, have not as a rule any relation in form or direction to the modern streams. They consist mainly of interrupted stretches of old river-bed, containing great bodies of the auriferous gravel, generally buried beneath deep folds of lava. The entire configuration of these river-basins has been changed, and the gravel-channels occur and crop out in places unthought of: beneath high ridges or obliquely across the existing slopes, sometimes at right angles to the present drainage slope. These rich gold-bearing gravels have been known as the "Blue Lead," and they have formed the seats of strenuous gold-getting industries, by tunnelling, drifting and hydraulicing. Indeed, the well-known industry of "hydraulic" mining was evolved in California to open these treasure-chambers. "Hydraulic" mining, it may be explained for the benefit of the uninitiated, consists of the directing of a great stream or jet of water, which is brought under pressure in steel pipes from some high source, against the base of the great gravel banks. The gravel falls and is washed into long sluice-boxes, where the gold is deposited by gravitation, the whole system forming a simple and effective means of dealing with vast quantities of material. Gold gravels of this nature range in the value

of their gold contents from an average of a few cents up to several dollars per cubic yard of material. The cost of obtaining the gold by the hydraulic method does not exceed a few cents per yard—in some instances only ten cents or less, so it is easily seen that great profit is obtainable under proper conditions from such deposits. Indeed, so active and extensive did these operations of washing down great banks of earth and gravel become in California and Oregon, that the regimen of the streams was seriously interfered with. Rivers became silted up; the channels raised by the *débris* and their waters overflowing on to the valuable agricultural land in the valleys to such an extent that bitter opposition to hydraulic mining arose on the part of the farming community. The result was that laws were passed by the State Legislature of California prohibiting this form of mining. Not only were farming interests injured but the navigable rivers suffered. The bed of the Sacramento became permanently raised much above its normal level, and, indeed, the water was only contained in the channel at all by long, costly levees, or artificial banks. The legislation against the miners formed the theme for years of the most bitter discussion, and at that time the subject overshadowed every other political issue—for it became such. In some of the wild regions hydraulic mining—so great were the rewards it offered—was surreptitiously carried on, and special officers of the law were appointed to spy out such operations; and a system of vigilance and defiance was brought about which was often settled with “shot-gun arguments.” A State Commission was then appointed to inquire into the whole question, for it was beginning to be made evident to the people of California that the future wealth of their state lay in agriculture rather than in gold-mining, a prognostication which has been amply verified. However, the law was relaxed to the extent of permitting of working hydraulically upon a certain scale, and with the proviso that dams, provisionally or cheaply built of boulders and brushwood, should be constructed in the ravines, with the purpose of intercepting the silt and *débris* discharged from the sluice-boxes.

These singular deposits of gold-gravel existed and exist over a very considerable range of country all along the foot-

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hills of the Sierra Nevada, facing upon the great central valley. These deposits, however, did not form the source of the gold which gave rise to the excitement following on the discovery of gold in 1849. The early comers simply washed out the gravel and sand of the existing river-bars by the aid of sluices, "long toms," rockers, pans, and all the other apparatus which forms so memorable a part of Californian mining lore. The original discovery of gold on the Pacific slope was made at the famous spot called Sutter's Mill, the specks and nuggets of free gold having been accidentally observed in the mill-race. After a period the knowledge of the discovery spread, bringing in its train a stream of adventurers from all parts of the world, and the streams and cañons of Southern Oregon and California—almost unknown until then—became alive with miners armed with pick and shovel, and the rocks and cañons echoed with the noise of their fevered operations and with the creaking of primitive current-actuated wheels, which raised water for the sluices. These hardy adventurers, animated by the lust of gold, swarmed up every creek and ridge, establishing their primitive cabins in every ravine, and bent their backs to their toil with one dominant hope—to win a fortune from Mother Earth in the briefest possible space and to return and squander it in the joys of civilization. I have visited many of the famous spots where these pioneers toiled. They are abandoned generally; the streams flow on as they did before; the old cabins have fallen to decay and the hastily-timbered drifts, run into mountain sides, to ruin. Nature reclaims her own again, and the lone cabins and the old mining villages, inhabited by some few remaining miners who have pinned their faith to the rocks and rivers, or who are too old or poor to leave them, wear an air of almost pathetic lament; as if it were whispered that "the place thereof shall know them no more."

Stories and descriptions of California in those early days would fill a volume, and have, indeed, formed the theme of volumes. It was a motley assortment of characters and races which formed the early Californian population. Gambling, drunkenness, blasphemy and murder were strong credentials for citizenship of that cosmopolitan republic of gold-getters. How many an unpunished crime was committed there God

only knows. Yet it was a race of hardy workers in the main, and there were many good among the bad, who helped to leaven them; and the old Californian pioneer was not devoid of characteristics which command approbation, and laid the foundations of an industrious community.

I wandered one day up a lonely cañon and sat down on the "dump" of what looked like an abandoned mine, whose gaping tunnel pierced the hill-side. The air was soft and spring-like, and the sun shone down upon the wild ravine and the beautiful Californian woods above it, whilst the sparkling waters of the "creek," as the American woodsman terms a stream, rippled joyously down over a bed of quartz boulders and among patches of the gorgeous Californian poppies. There seemed to be no sound, yet as I listened I heard the faint, constantly repeated thud of a pickaxe underground. There was some one in the mine, and after a space an ancient miner came forth, wheeling a dilapidated barrow and blinking at the daylight as he emerged into the sun's rays from his subterranean darkness. There is ever a bond of sympathy between the engineer and the miner, and we soon got into conversation. The old fellow told me how he had worked that tunnel single-handed, on and off, year after year, for a good part of his life; how the tunnel or adit was destined "to cut the lode," and how he calculated that less than fifty feet divided him from the coveted ore-body upon which he had founded his faith from its favourable surface outcrop on the summit of the hill hundreds of feet above. "Would I give him an opinion as to how much he really lacked to encounter the lode?" he asked, as we conversed. He had no "book-learning," he averred, but he had spent, time after time, his last fifty-cent piece to purchase a stick of dynamite, going without food sometimes to get it from the store when his credit had been exhausted, so as to advance yet another yard or so into the hill. Of course I would, although I protested no knowledge of the local conditions. However, I examined the outcrop, and noted the apparent angle of the lode and approximate height of the hill. My rough calculation might have destroyed the old man's hope at a blow; for it showed that, instead of fifty feet of rocky wall there remained something like five hundred feet for him to tunnel

between him and his coveted lode! But I could not bring myself to tell him this. He had made the common error in such cases of not allowing sufficient for the dip of the lode, which was not vertical but sloped *away* from his tunnel. Besides, I might have been mistaken myself, and lower down, even, the lode *might* have turned again with some "fault"; or he *might* even have cut yet another lode: or any other uncertainty of mining. No, I would not discourage him, but returned an evasive answer. Almost tremblingly the old fellow brought forth from a dilapidated board shanty in the ravine, where he had lived for years he said, some pieces of quartz. I examined them; and there were the characteristic flakes of yellow gold embedded in them. "Did I not think it was rich?" and "Did not a fortune await him if he could but cut the lode?" To both of these questions I could honestly reply in the affirmative. Perhaps the old fellow is toiling on to this day, with the gleams of gold ever in his mind, hoping to "cut the lode." Perhaps the old shanty is empty, the thud of the pickaxe no longer heard in that musty tunnel, and perhaps the old toil-wizened face and grey hair and bent back have departed to some more ethereal, more golden, shore! I was glad I had not discouraged him, for I found afterwards that he was being "grub-staked" by a man in the village who shared his faith in the mountain; and he might have lost his occupation on an adverse rumour. The old miner is typical of many things, we may permit ourselves to reflect, kind reader.

During my camping period in the same region I set out one afternoon to visit one of the big hydraulic mining districts in that part of California—somewhat to the north-west of the Union Pacific Railway—a district where active work had been stopped by reason of the injunctions against these operations, as before described.

It fell to my lot to miss the road, and before I regained it night fell and a pelting storm came on—snow, hail, rain, wind and every other element being seemingly let loose in the sierra. However, moonlight alternated with flashes of vivid lightning, and I was enabled to follow the road; and weary and absolutely soaked to the skin I arrived, in the still dark early hours of the morning, at the mining village. The

suspension of mining work had caused the place to become almost entirely abandoned, and the fitful moonlight shone on a row of ruined board shanties, many of them doorless and windowless, alternating with groups of dark pine forest and evil-appearing water-holes. Away from the road stretched great yawning chasms where the gold-gravel had been washed away in the hydraulicing operations; the pitiless rain alternately cleared and pelted down, and upon the horizon the rugged and broken forest-clad hills loomed up menacingly. The whole scene was weird and forbidding, and, with the abandoned habitations and the eerie feeling of the night, without human soul around, gave the place an aspect such as might have appealed to the imagination of a Dante. But I had yet to experience a further part of its weirdness and uncanniness. I knocked at door after door of the dark, forbidding shanties, hoping to find some inn or habitation where I might secure at least shelter from the storm. Raising my eyes above the door of one of these, which seemed to bear a signboard of some description, I struck a match to read it. It was an inscription in Chinese! Passing on hastily—for there is something about a Chinese habitation which ever inspires repugnance—I approached another shanty. A similar inscription met my eyes; and so on with at least half-a-dozen more. I felt like one in a dream! In one of the shanties I thought I heard voices, and moreover the pungent odour of “punk,” or incense, such as these people burn, and whose odour, once smelt, is unforgettable, hung about the place. “This must be some joss-house,” I murmured to myself, for I knew something of Chinese methods from my visits to the Chinese quarters of San Francisco. However, I resolved to knock, as the storm had come on with relentless fierceness. So I vigorously hammered at the door with my stick. No response. Again I hammered still more loudly, and a moment afterwards a window opened above and the head of a Chinaman was thrust forth, his repulsive face lighted up by the glimmer of some candle or lamp inside. A torrent of gibberish flowed from his mouth, of Chinese with a few broken words of English, of which I could make nothing. However, I shouted out my desire for shelter till the storm passed, and

the head was withdrawn and the owner, a Chinaman, in his singular native dress, came down and opened the door. But my hopes of shelter were rudely dashed to the ground. After treating me to another torrent of gibberish the repulsive-looking celestial—more like a baboon than a man—banged the door in my face, and I heard the bolts shot on the inside again.

Prospects of shelter—to say nothing of bed and board—seemed remote. I have had various experiences with Chinamen on the Pacific coast, whether in California, or Mexico or Peru; and I cannot say that my recollections of them are pleasant. As a race Chinamen are detested in California, although it would not be fair to lay the onus of this entirely upon the Chinaman. I walked on, barely escaping falling into a pool of filthy water outside that celestial dwelling. But fortune was with me now. I knocked at another door, and it proved to be that of the “hotel” of the place, which was “run” by a “white man.” Never did the sound of an Anglo-Saxon voice fall more pleasantly upon my ears. The owner was up—it was now early morning—and even his uncivil tones—for the native American is either natively or purposely uncivil as a rule—were welcome after the Chinese gibberish. There was a fire burning in the “saloon” or bar-room, and I changed my clothes and put on some I borrowed from him whilst my own dried.

The incivility of the Western American does not necessarily arise from native disagreeableness. It is a sort of defensive measure; he wants to impress upon you that he is as good as you are, and adopts this way of doing it; and perhaps he thought that this early and unexpected guest, in the form of a young Englishman of refined speech and appearance must necessarily be about to show him some superiority. However, we soon understood each other, without much ceremony, and when he found that I was not a State official spying on illicit hydraulic operations, his “You are a Britisher, I guess?” and my affirmative became a passport and not a ban; and he undertook to show me round the place.

The rivers of California, descending from the sierra, rise very rapidly after the rain-storms in the mountains, and it is

often impossible to cross them, although one may have forded them a few hours previously. So it befell me on one occasion, during my camping in the mountain hut before mentioned. I had ridden into the village across the river some miles away to order provisions, for the larder was exhausted; and I tied up my horse outside the "store" to make my purchases. Unfortunately a passing buckboard—as the light, two-wheeled Western vehicle is termed—drawn by a restive horse, frightened the horse, who, breaking his halter, set out at a gallop for home. This was troublesome, to say the least. It was ungrateful, too, as the animal appeared to have forgotten a very recent occasion when, arriving at a distant village, I found I had left all my money at home except a single coin, a "two-bit" piece, or twenty-five cents. I had been very hungry myself, but I knew the horse was also hungry, and, moreover, he had to carry me a long way. The "two-bits" represented the price, on the one hand, of a modest lunch at the "saloon" bar, and on the other a feed for the horse—which was it to be? I decided on the latter; the animal took his feed, and I tightened my belt. However, no doubt equine memories of services are short (not unlike those of human beings at times), and so I had to put the best face possible upon it. Unfortunately there was no one available to deliver the sack of groceries I had purchased; and knowing the empty state of the hut and that my companions depended upon my exertions for the evening meal—they had gone on a gold-prospecting expedition—I decided in a rash moment to carry the sack myself. I shall never forget that infernal sack! By the time I reached the river it seemed to weigh half a ton; and the corners of meat-tins and other things rubbed my shoulders sore. One glance at the turgid stream was enough. It had risen, and was still rising. How was I to get across? There was nothing for it but to venture into the stream, which I did. The water surged round me up to my knees, up to my waist, whilst the sandy bottom gave way at every step, causing me to reel and stagger like a drunken man. It was too deep for safety, and I strove to return; but at the moment the current took me off my feet and carried me, battling, half swimming, down stream. But I would not let go the infernal

sack, whose weight kept dragging me down like lead. Once I went clean underneath—was I to be drowned like a rat in a California mountain stream; and my body recovered on some sand-bar miles away? I did not believe myself destined for so ignominious an end, and taking heart, struck out and reached a half-floating trunk projecting from the bank—a trunk which we had felled to form a bridge across the stream before it rose. With a great sigh of relief I clambered up it—still holding that appalling sack—and so reached the bank. As I did so a wave of water came down, surging wide and foaming along, and carried off the tree in a turbid flood! I soon gained the hut, and tumbling out the soaked articles on the floor—alas! for the sugar and the coffee—my companions, two Britishers like myself, sorted them out whilst I changed my garments.

This river was continually fighting against us and cutting off our sources of food supply. On one occasion we had no meat for several weeks, until one day—I was absent myself scouring the forest for game—an old bull came along, probably from some abandoned ranch. My two companions would not let slip the chance. They sallied out armed with Winchesters and did pursue that unfortunate bull over hill and dale, loading him with ill-directed bullets, until—as it was afterwards averred—he laid down and expired from sheer weariness from the weight of lead! When I returned I found the outside of the hut festooned with strips of meat; and we had jerked beef for a period. It was terribly tough, though! The dry air of California permits the curing of meat in this way. The term “jerked,” it is interesting to recollect, is a corruption of the Peruvian or Chilean-Indian word “charqui.” For myself I had not returned empty-handed. After hours of fruitless wandering among the manzanite bushes and pines, seeing neither bird nor quadruped—for game is scarce at times—I suddenly saw a long-tailed hare moving cautiously from a clump of bushes, and swinging round, brought him down at fifty paces. A moment afterwards I heard the familiar cry of the Californian quail near at hand. Now, these birds habitually fly very low over the bushes, dipping down among them with sharpened instinct to get under cover, and are often very difficult to obtain on the wing.

But they have another and fatal habit, which renders them easy prey to the hunter: the habit of walking in single file close together along the little natural paths between the shrubs. So I waited, and when they came in view end on, let fly, mowing down no less than seven plump beauties with one barrel. I did not like to kill them in this way, for the sportsman loves not to kill hare or form or bird except on wing; but necessity knows no laws. A few minutes afterwards a pair of fine wood-pigeons came floating along on airy wing, and dropped prettily to the gun's report, and I felt in a measure vindicated as to sportsmanship. What a singular sense is that of the sudden gratification which fills the chasseur when his victim falls! "It is a fine day; let us go out and kill something." Yet, personally, I must confess that this has always been followed by a pang of regret—in the glazing eye of the deer, or the beautiful inert little head of the quail or the wood-pigeon, nature seems to speak some reproach!

Of big game in California the wild sheep are, perhaps, the most famous—the grizzly bear is nearly extinct, or has gone farther north. These well-known big-horns, or Rocky Mountain sheep, are of exceeding beauty and majesty, and are sometimes found in large bands, up to fifty or more. In the snowy winter they descend to the lowlands, notwithstanding which they are as fearless of storms as they are of precipices and avalanches, living as they do in the most remote of the mountain fastnesses among the inaccessible crags. In such places, from thirteen thousand feet or more above sea level, they bring forth their young, generally in some sheltered nook selected at what are elevations higher than the eyries of the eagles! Indeed, the elevation of the habitat of these beautiful animals is sometimes almost as great as that of the vicuña and guanaco of the Andine uplands of Peru and Chile, where I have sometimes come across bands of forty or fifty of these graceful camel-kindred. These great Rocky Mountain sheep are famous for their extraordinary power of jumping down precipices in a way that probably no other animal can perform. Eye-witnesses have described their bounding or diving down almost sheer rock-walls for two hundred feet into the cañon below when startled, alight-

ing on their horns on the ground uninjured and unconcerned. But their usual mode of descent is by successive bounds from the face of the precipices, as if breaking the fall—a mode of remarkable locomotion for which their feet seem to be adapted by nature, with a species of soft, tough pad to grip the rocks, like an india-rubber cushion.

The hasty tourist in California may complain of the lack of bird and animal life, but the more leisurely sojourner will find that game abounds in many regions. Yet it is true that one may pass a whole day and see neither rabbit, squirrel, nor feathered denizen. In some regions deer are plentiful; and California possesses three kinds, the most abundant of which is the *Cervus Columbianus*, or black-tailed deer. Other denizens of the forests, crags and plains are the squirrels, wolves, coyotes, long-tailed hares and badgers.

If the mountain forests of this part of the Great Pacific Coast are varied and wonderful with their bay trees and special attributes, so are also the sea-forests of the shore, the submarine groves and their denizens, for which Southern California is famous. For the observation of these beautiful sea-plants, glass-bottomed boats are provided at Monterey and Santa Catalina, and the fisherman or observer can gaze down forty or fifty feet into the translucent water upon the giant kelp and the fishes, which stand out in iridescent colours against the green seaweed. Flights of blue perch, huge white or mauve sea bass, giant black bass weighing three hundred pounds; myriads of jelly fishes and singular sparkling crabs may be seen, a wealth of sea life of interest and beauty. Indeed, the possibilities of sport and fishing in California forms a subject so extensive as to call for a literature of its own.

The great sandy beaches of the Californian coast stretch southwardly from the Golden Gate with but few inlets, and viewed from the sea the coast presents the arid appearance which is characteristic of much of the Pacific Coast of America whether in California or in Peru and Chile. Many of the ports of call for steamers on the Californian coast are subject to heavy surf and considerable variations of tide-level, and steamers have difficulties in discharging in some places consequent upon these conditions. On one occasion I

travelled up the coast from San Diego in a coasting steamer, and the skipper, at one of these ports, doubtless being in a hurry to discharge his freight, adopted the method of letting go an anchor and allowing the steamer to drift in on the rollers till her keel almost scraped bottom, so as to approach the end of the pier—a method which seemed to the passengers more ingenious than safe or comfortable! Wrecks are not infrequent upon this coast; and the ribs of many a steamer have laid unsalvageable on the teeth of the Golden Gate, their navigators having failed to make the entrance in the dense mist which hangs around that singular cleft in the Californian coast range at certain seasons. I saw a big liner of the Panama Line which lay there intact on an even keel for half a year, with sharp rocks firmly anchoring her to the spot. There she lay, a noble hulk, never to plough the waves again, furnishing a spectacle for launch-loads of cheap excursionists from San Francisco until a kindly storm broke her up and took her to rest into the depths of the great watery chasm of the harbour's mouth.

The surf-beaten, wind-swept shore of the San Francisco promontory, blown into sand-dunes by the perennial winds, and shrouded often in the dense fogs which cover the Californian coast at times, speak eloquently of shipwrecks and adventures in years gone by. To the south the bones of old ships lie here and there, and the bones of whales; and the hoarse cry of the seals upon the rocks strikes on the ears amid the roar of the surf. Far away the points of the Farallons may be seen on a clear day, faint in the haze of the Pacific Ocean horizon. And buried treasure—Ha! I saw a Scandinavian sailor one day sounding the beach with an iron rod at high-water mark to discover a chest of Spanish doubloons and church plate which—he said—was lying there; and he begged that I would help him with small funds wherewith to prosecute his search, and share the treasure. Being at leisure at the moment I lent ear to his singular yarn. He told me that a friend of his, an old "forty-niner" of San Francisco, had discovered this chest years ago, but owing to the lawless state of things at that time he had only been able to take hastily a handful of the gold, and then cover up the heavy chest with sand, taking angles and signs to the spot;

and that with the aid of the old man's map, which he showed me, he was now probing for the old chest.

Well, more for the adventure of the thing than for any definite expectation of treasure trove (there was always the possibility), I agreed to assist to the extent of one hundred dollars, which should limit my liability, and the old "forty-niner," aged, rheumatic, yet full of belief in the wonderful chest, having sought me out, we agreed upon respective thirds in its supposed contents: a prospective share which they assigned me unasked. Forthwith the Dane and the "forty-niner," animated by this addition of capital, diligently sounded the beach within the area prescribed by their map, whilst I set out to fulfil my purpose of examining the auriferous deposits of black sand which exist upon the beach beneath the cliffs upon that part of the coast.

I was going to bed a few nights afterwards in my hotel in San Francisco when the Dane appeared. "Come! We have found the chest!" he exclaimed in tones of excited secrecy. "Only a foot of sand and water lies between us and the gold!" Now, whilst I had entertained grave doubts of this wild goose chase, there was, of course, always the possibility to be considered, and if they had really found something I must be in at the death. So to the beach—a good many miles from the city—we repaired, and there was a glimmering light in the tent where the ancient "forty-niner" kept guard over the place; where a rude shaft of planks had been sunk in the sand and a pump installed to keep out the water. But their last dollar was gone, and another labourer was required to help at the pump. To cut a long story short we secured a labourer on the morrow; but, somehow, the story of the supposed find had got abroad and a crowd of people and some enterprising reporters came out to the scene of operations. The crowd increased so much that a special policeman had to be told off to keep order, and we thought it well to suspend operations until nightfall. On the following day, however, the sea broke in, and all the water had to be pumped out of the shaft again. "The sea seeks to hold the treasure," the Dane averred. In the newspapers of San Francisco there appeared a thrilling account: "Great Treasure Trove on the Ocean Beach: Spanish Galleon

Unearthed: An Englishman and a Dane to make a fortune from a Pirate Hoard!" and so forth, with a picture of myself, inscribed as an Englishman with "raining-in-London-trousers" on. This, I must explain, is an allusion to the British habit of turning up the bottom of the trousers, and is humorously supposed to be a barometric-sartorial indication of the state of the weather in London!

At last the sun set, the crowd dispersed, the evening breeze whispered among the sandhills, and the Dane, the "forty-niner," the labourer and myself prepared to unearth the object—whatever it might be—which they had located at the bottom of the shaft. The Dane, who had sailed many seas and was a typically superstitious subject, said he had seen a phantom ship run ashore there on the previous night, and that it was an omen—good or bad he did not seem to know! Well, we got our tackle to work and, pumping out the last foot of water, cleared away the sand at the bottom of the shaft. What lay there? . . .

Probably that treasure chest is lying somewhere still on San Francisco beach, for all we found was part of the wreckage of an ancient hull; and I left the Dane and his companion almost shedding tears of disappointment upon the sandy beach. But they were not to be balked of all profit, for, going out again on the following day—it was Sunday—I beheld a great crowd thronging around the spot, which the two men had enclosed with canvas, and the "forty-niner" was holding a sack into which he was dropping the ten-cent pieces which the public was thronging to pay to view the "Spanish treasure chest," as a large placard outside informed them, "Admission ten cents!"

HARVESTING IN CALIFORNIA.

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VI

CALIFORNIA : THE LAND OF GIANT TREES, GREAT CAÑONS AND BIG ORANGES

As already observed, California is divided topographically into two regions—Northern and Southern California. Of the northern part the San Joaquin and Sacramento valleys, and the Sierra Nevada and the coast range, which bound it on either side, are the main natural features. The topography of Southern California differs greatly, as will be described.

The resources of the Great Central Valley, as already shown, are varied and extensive. The numerous towns and villages which have sprung up throughout the state are marvels of rapid growth of civilization in a land where, fifty or sixty years ago, the desert stretched uncompromisingly over the face of the country. The only approach to such development elsewhere on the Great Pacific Coast is that of British Columbia and Vancouver, and the region of Puget Sound, to the north. Southwardly, from Mexico to Chile, there is, so far, no such marked evolution of mankind in America.

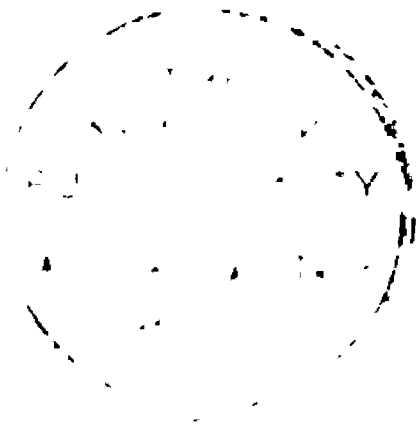
The San Joaquin valley is traversed longitudinally by two lines of railway, belonging to the Southern Pacific Company, one of the largest of the huge railway systems of the United States. Some years ago the monopoly of traffic and high prices charged for transport by this company aroused the indignation of the industrial community of the country, who declared that the Southern Pacific Company had taken as their motto, "All the traffic will bear," and had fixed their tariff accordingly; and the enterprising citizens organized themselves into a company and began the construction of a rival line down the valley. These questions, however, have been solved, and the Southern Pacific Railway is an active agent in the state's advancement. In addition to the valley lines and their branches there is also a railway paralleling

the coast, and a further network of short lines in the important region to the east of San Francisco Bay, which merge into the main line running north into Oregon and British Columbia. To the south the railways traverse Southern California and thence the "Sunset Route" and the Santa Fé lines take their way through Arizona to the east, and still farther south into the republic of Mexico.

Not far from San Francisco Bay is Stockton, a town which enjoys the position of being at the head of tide-water navigation on the San Joaquin River, and is an important and growing commercial centre about a hundred miles to the east of San Francisco, with a considerable traffic to the bay. The importance of this traffic will be gathered from the fact that it is exceeded by only three rivers in North America. The great "tule" lands, or reed-swamps of the delta, which lie along the river valley in this neighbourhood, have been reclaimed to some extent, and are found to be very valuable from their fertility. The district, from its dykes, have been termed the California Netherlands, and the lands are employed for cattle and dairying industries. As a city Stockton is well built, with numerous industries of a manufacturing nature, which the adjacent coal and natural gas fields supply with fuel.

The city of Oakland lies across the bay from San Francisco, reached by the great ferry steamers which ply constantly to and fro; and it forms the point of departure for the overland route—the main line railways—to the east. It is a city of fine suburban homes, and is growing with that remarkable rapidity possible in these western towns. As its name implies it was formerly a great oak park: the splendid oaks such as California produces in profusion. Near at hand is Berkeley, the seat of the famous California University. Like the other great California seat of learning—the Stanford University at Palo Alto—this owes its existence mainly to the generosity of a Californian millionaire, and its wealth and resources are very considerable. These institutions boast that they are absolutely free, without restrictions of race or sex. Nevertheless, the "colour line" is jealously drawn in all American institutions in a way unknown in Britain or British dependencies.

PETROLEUM WELLS NEAR BAKERSFIELD, CALIFORNIA.



Leaving these progressive and handsome places, which are under the commercial and populating influence of the port of San Francisco, and proceeding northwardly beyond Sacramento, the capital, up the valley, or southwardly up or down the coast, the towns become smaller, and industries give place to agriculture. Alameda, San José, Fresno, Bakersfield, Santa Barbara, Santa Cruz, Monterey and others are all important places.

The Californians are exceedingly proud—not without reason—of their state. The pamphlets and enthusiastic newspaper accounts issued, constantly setting forth the advantages of that favoured land, evoke a smile from the foreign reader. In the first place they bring forward their climate and area. A map of California issued by enterprising railway and land agents shows the area of the country—158,360 square miles—laid out with the forms of the states of the “effete East” spread upon it, such as New York State, Maine, Massachusetts, Ohio and several others, with generous spaces left in between! There is nothing mean about the Californians, and they want to show how their own land is equivalent to the combined area of the others, with room to spare!

California’s greatest attractive asset has been its climate; and, indeed, this portion of the Great Pacific Coast is remarkably favoured by nature in this respect. So much was the climate advertised during the times of the “boom” that it was at length sarcastically averred that people “could not live on climate alone”! The climate of California is largely determined by the prevailing winds blowing westwardly from the Pacific. Winter and summer do not exist as known elsewhere; only a wet and dry season. The effect of these winds is most marked on the coast, less so beyond the coast hills in the Sacramento valley; whilst the great basin-deserts east of the Sierra Nevada do not feel their effects at all. It is interesting to compare the wind-climatic effects of California with those of Peru, which I have described in the chapters devoted to the old land of the Incas.

The Californian temperatures exactly follow the topography of the state, in well-defined belts. First is a hot zone, ranging from 68° to 72°, occupying the low desert lands east of

the sierra and of the San Bernardino ranges; next a zone of 60° to 68° , running up the base of the Sacramento and San Joaquin valleys in Northern California and covering the coast zone of Southern California; next the temperate belt of 52° to 60° in the long foothill zone of the Great Central or Sacramento and San Joaquin valleys, and the coast strip between the coast range and the sea in Northern California, which includes the whole of the San Francisco region and the coast strip north and south and part of the eastern slope of the sierras; then a 44° to 52° zone on the higher slopes, both sides, of the Sierra Nevada, and lastly the highest flanks and cañons and the summits of the Sierra Nevada itself and the coast range. Thus the traveller may select any climate he may desire by seeking the valleys or the mountains. Experts have said that the air is more equable and rejuvenating here than in the south of France or on the hillslopes of Italy; and it certainly has wonderful advantages for out-door workers, whilst the growing season may be said to be perennial. The mean temperature for the state as a whole is 60° , and for San Francisco 65° . The mean annual temperature for Southern California is about 62° ; whilst its maximum goes up to 100° , which in the characteristic dry atmosphere seems much less. In winter light frosts are prevalent in the early morning in Southern California; whilst in the sierra region the country is ice-bound and snow-bound in winter, as described before. It is to be recollected that the wind and fog from the sea in the northern region are at times exceedingly cold and unpleasant, and, as a rule, San Francisco may be looked upon as a cool rather than a hot city. The delicious climate and atmosphere of Southern California have rendered that part of the country famous. The dry, cool, ocean and mountain breezes are in marked contrast with other semi-tropical places. The occasional drawbacks are the wind-and-dust-storms or "northers," hot winds, sand-laden, which obscure the air when they occur, like the adobe dust-storms of Mexico. These are unpleasant, especially when you are camping: dust covers everything, and your meals, if in tent or hut, consist of a percentage of dry pulverized earth. But none of these blemishes can detract much from California's attractive asset of her climate, and if

every petty town calls itself the Spain or Italy of America we need not, kind reader, find cause for quarrel on this score.

The big trees of California are the most remarkable things in plant life upon the whole of the twelve thousand miles of the Great Pacific Coast. The coniferous forests of the North Pacific region, of which the various kinds of giant trees are the prominent members, have been described as the grandest and most beautiful in the world, and probably there is no necessity to dispute it. The charm of the Californian forests—apart from the size of the trees—is that they are open and unobstructed of brushwood; their floors formed by long avenues and park-like glades where groups of trees of the various species stand apart—a great contrast, for example, with the tangled jungles of tropical America, such as the Amazon valley or elsewhere, as we who know both may bear witness.

The giant Sequoias and redwoods are found only upon the western slope of the Sierra Nevada of California, nowhere else in the world, and even there only within a certain latitude and well-defined altitude above sea-level. They are the effect of certain topographical and climatic causes; and with their (in some cases) five or six thousand years of life and colossal form they seem rather to be remnants of a time when the world was peopled with strange huge things than part of the vegetation of to-day. These giant forest trees existed at one time, it has been shown, in various parts of the world—in Europe, Greenland, China—as evidenced by fossil remains; and they were destroyed during the Ice Age and have only survived in California. Here they occur in groves, growing upon what were great moraines, and alternating between these groves are deep cañons worn out by the waters of glaciers; the great glaciers of former ages flowed down the slopes of the Californian sierra and left their furrows; whilst the giant trees were preserved, and flourished in the warm places between these ice-rivers. The boundaries of the glaciers, it would seem, determined the boundaries of the big tree groves—a singular phenomenon in the life of these regions. The “group habit,” or grove-forming character, however, of the great Sequoias is also explained by the fact that the tree grows only from its seed, and the seeds do not migrate far

from the parent stem; they keep close together from their singular family habit and have not extended their sphere of influence since the Ice Age. The age of the trees has been estimated, in some cases, as high as 8,000 years. The greatest size encountered is that of 35 feet in diameter of trunk, inside the bark, at 4 feet from the ground. The average size of the full-grown tree is given as 275 feet in height, with a trunk diameter of 29 feet near the ground. In the Sequoia groves, or giant forest, which are preserved by the United States Government as a national park, lying between King's River and Kern River, it is stated that there are more than 5,000 of these huge trees from 200 to 300 feet high. As we observe the landscape from some high point these giant Sequoias stand out from among the giant Sugar Pines and Yellow Pines, the Red and Silver Firs, and the Cedars with an unmistakable form. Their shape is remarkable, with a singular air of serenity and proportion which might seem to be the result of evolution or development—like the Ionic column. The trunks taper gently upwards like the great fluted columns of a temple, whose roof might be the sky without branches, for 100 feet; the whole structure stands poised over its own centre of gravity, with scant but symmetrical foliage, as if the teachings of the storm of five thousand years had bid it doff all superfluous adornment and content itself with its simple, noble dome of evergreen foliage. The shadow of these manes of plumed, sober foliage falls athwart the great stately trunks like the shadow of its capital projected upon an Ionic column in the sunshine. The giant trees grow freely from seed, and there is no danger of their exhaustion. The great Sequoias exist in well-defined belts at the elevation of 5,000 to 8,000 feet above sea-level, forming part of the marvellous coniferous forests, which are the pride of the Californian mountains. Its particular habitat is between the belt of the great pines on the one hand and of the silver fir on the other. Its northernmost limit is upon the central fork of the American river, near the line of the Union Pacific Railway, in latitude about 39° , and extends southwards along the sierra slope for a distance of some 260 miles. In the northerly part of this zone, as far as King's River, the Sequoias lie in scattered

CALIFORNIA: GIANT SEQUOIAS: MARIPOSA GROVE.
ROADWAY THROUGH TRUNK.



groups, but southwards they form extensive forests. The most visited grove is that of Calaveras, and it is veritably tourist-trodden. This grove has 100 giant trees, one 325 feet high. Other well-known, but less visited, groves are the famous Mariposa Big Trees, somewhat to the south of the Yosemite valley; the Grant National Park, in the King's River region; the Giant Forest of the Sequoia National Park, and the Tule River Forest. These huge scenic reservations, with their groves, have wisely been retained for the nation, and are now guarded from destruction by a body of soldiers stationed therein. Most of these giant forests are reached by railway and stage coach, and there is hotel accommodation at hand for travellers. •

There is a near relative of the *Sequoia gigantea* in the coast range, and forests of this valuable timber—it is the *Sequoia sempervirens*, or redwood of commerce—exist from Monterey, south of the Golden Gate, up to the boundary with Oregon, in the north. This tree thrives best in the places most exposed to the Pacific fog, and near Santa Cruz, south of San Francisco, is a fine grove with specimens 275 feet high. Other giant trees of California are the mighty Sugar or Douglas Pines; full-grown specimens of which commonly have a trunk diameter of 6 to 8 feet, and a height of 220 feet; whilst specimens reach 12 feet in trunk diameter. These beautiful symmetrical forest monarchs have well been termed, from their serene, majestic appearance, “the priests of pines, ever addressing the surrounding forests.”¹ Growing in a wide habitat, from the burning deserts up to the edges of ice-bound craters, is another big tree: the Silver Pine, with a trunk of 6 feet in diameter and 200 feet high.

From the big trees to the great cañons is a natural transition—Kern River Cañon, King's River Cañon and the famous Yosemite valley. The latter is in the very heart of the Sierra Nevadas, upon the Merced River: one of the series of great glacier-carved cañons whose streams, born of the sierra snows, flow westwardly down the slopes to join the San Joaquin River in the great central California valley. It would be beyond the province of this book to attempt much description of the scenic wonders of this famous cañon. It

¹ *The Mountains of California.* John Muir.

has been adequately described by many writers and in various guide-books; and the Yosemite is the chief point of scenic interest towards which the tourist bends his steps. Like some other mountain scenery in other parts of the world language cannot adequately describe the impressiveness of this valley, and many observers have been obliged to fall back upon the culminating asseveration that it is the "most wonderful and beautiful thing in the world!" The beauty of Yosemite is due, topographically speaking, to the vast height of the cliffs rising from it on either hand, and their stupenduous and imposing form, like cathedrals and giant fortresses of nature's building; together with its broad level floor of great width, covered with natural pasture, meadows and groves of giant trees and waterfalls in so unique a fashion as to form a veritable natural park. It seems that nature has sought to concentrate her scenic powers there in one great impressive exhibition. The cañon is not a barren V-shaped valley with a chaos of tumbled rock and talus, but "green grove, emerald meadow, flowery pasture, crystal river, crowd up to the solid white feet of lofty precipices; and one looks up to sheer mountain summits three thousand or five thousand feet above him in the zenith," to quote from a Californian description.

The length of this wonderful valley is about seven miles, and its width half-a-mile in places; whilst the elevation above sea-level of its floor is about four thousand feet in the middle. Its geological formation has been well studied; the great granite walls, 3,250 feet high at Glacier Point, and others of its famous headlands are great cleavages, glacier-polished. Mists float upon their brows, long cascades fall down their faces, and their bases are bathed by groves of giant trees. The valley and its surroundings were ceded by the State of California to the Federal Government of the United States as a national reservation or park, and it is carefully preserved for this good purpose. Adjacent to Yosemite, or within easy reach thereof, is the famous Mariposa big tree grove: those marvels of Sequoia size, grave and symmetry which I have before described, and which have been well termed "the kings of the conifers." One of the trees of this grove, the "Grizzly Giant," is more than ninety-three feet in trunk circumfer-

VIEW IN THE KERN RIVER CAÑON.

ence, and although its maturity has been reached it is supposed that the tree will flourish for another five thousand years—a total possible life of something like ten thousand years! A tunnel has been cut through the trunk of one of these giant trees, and the stage-coaching tourist is driven through this, to his wonderment or sense of desecration, according to the trend of his mind. Camping in the Yosemite can be performed with ease for those who like camping where furnished canvas tents with wooden floors are set down to order, and mail and washing called for and delivered! More “strenuous” conditions can be secured for those who prefer them; and, indeed, Californian guide-books love to term this region the “campers’ paradise.”

The King’s River cañon is a remarkable gorge also in the heart of the Sierra Nevadas, about a hundred miles to the south-east of Yosemite. The King’s River is born in the snows of the great culminating peaks of the sierra in the region of Mount Whitney, which also dominate the head of the Kern River, flowing down to the San Joaquin. The King’s River cañon is the southernmost of the series of these great valleys, and forms a stupendous glacier-sculptured cañon ranking only second to Yosemite, which it resembles in some respects. Mighty granite walls and cliffs rising from natural groves, parks and meadows, threaded by a shining river, are presented to the view—the cliffs towering upwards three thousand to three thousand five hundred feet above the valley floor; whilst along their bases are flowering meadows backed by lines of lateral moraines and forests of incense cedar and giant sugar pines. Ascending this valley to its head, past innumerable clear streams teeming with trout which flow through the meadows, up past the glacier lakes, the “eyes of the landscape,” we reach the summit of the Californian sierras, the *divortia aquarum* between the watersheds of California and Nevada; and from the crest the territory of the latter state, on the eastern side of the range, is seen eight thousand feet below.

The eastern slope of the sierras of California, like that of the Andes of Peru, is much steeper than the western. The King’s River cañon rises from the San Joaquin valley fourteen thousand feet in sixty or seventy miles; but the

mountains fall away from this summit into Nevada with a gradient of one thousand feet to the mile.

Among the remarkable hydrographical features of the American Cordilleras are the glacier-lakes, such as exist from California to Peru; these generally form the head-waters of the sierra-descending rivers. In California they lie amid deep forest-fringed, snow-capped mountains and escarpments, both upon the western and the eastern slopes of the Sierra Nevada. Chief among these lakes is Tahoe, a body of the clearest and most remarkably-tinted water in the world, occupying a mountain cup more than twenty miles long and thirteen wide, at an elevation of 6,240 feet above sea-level, with a depth in places of two thousand feet. Tahoe is fed by the snows from the rim of its basin, and it overflows by its single outlet, the Truckee River, whose waters have of late years been utilized in the adjoining state of Nevada, as later described, for purposes of irrigation. The contrast of emerald, blue-green, and white, formed by the surface of this lake and its reflection, with its foreshore and surrounding peaks and fringing forest, may be considered unique in lake scenery, and Tahoe has become a well-visited tourist resort, easily accessible by the rail, the Southern Pacific, which reaches the summit of the Sierra Nevadas slightly to the north. Lake Tahoe is partly in California and partly in Nevada, as the state boundaries traverse it longitudinally.

Elsewhere are numerous others of these lakes, some known and visited, others absolutely hidden away among the cliffs and forests, their margins untrodden and waters unrippled except by the mountain birds. They form singularly beautiful examples of the glacier-sculpture of the sierra ice-age: reservoirs in nature's mighty hydraulic machine, which these mountains are.

As elsewhere stated, the topography of California changes much towards the south. The coast at Point Concepcion turns sharply from its southerly trend to an easterly direction; and the range of mountains which has followed it turns inland and curves onwards to join the Sierra Nevada, which culminates there at about a hundred miles from the sea, in the high snow-clad peaks elsewhere described. This curve forms the lower boundary of the San Joaquin valley, and is

known as the Tehachapi range, one of the counterforts of the cordilleran system. Inside this curve the Kern River flows in a horseshoe course, going thence northerly and falling into Lake Tulare, whence it emerges as the San Joaquin River upon its long journey down the valley to San Francisco Bay. The Kern River cañon is wild and striking, with steep rocky escarpments, clothed at their bases with giant pines. The railway ascends to the Tehachapi Pass by means of a remarkable "loop," crossing over its own track with one of the ingenious "loops" or spiral courses to gain altitude often necessary in the construction of trans-cordilleran railways. South of Tehachapi lies Southern California, beautiful land of orange groves: perpetual snow on mountains twelve thousand feet high: and azure skies.

The atmosphere of Southern California is singularly clear, and the far-off mountains—they may be sixty miles or more away from us—seem quite near; and the sculptured outlines of their snowy crests as they rise above shimmering sandy deserts will remind us of the Andes of Mexico and Peru, on a lesser scale. By nature Southern California is treeless, and were it not for irrigation it would again be what nature made it: an arid desert whose only beings of the vegetable world are the cactus and the mimosas. In this, again, it shares the characteristics of the Peruvian Andine coast zone. The beautiful orange groves fed and watered by the hand of man; the luxuriant magnolia avenues, palm groves and great eucalyptus trees from far-off Australia, with which the Californians have beautified their environment, can never entirely atone for the absence of natural forests. Southern California is, indeed, as treeless as parts of Spain, which it is not unlike in other matters, or as the Great Plateau of Mexico. When we consider how precarious this artificially induced vegetation is; when we reflect that the negligence of man, or some act of nature—upheaval, earthquake, or drying-up of fountain-heads—might cut off the water at its source, we cannot but ask ourselves if civilization can be permanent in such regions. Yet we are comforted to a certain extent in these reflections, for did not the very source of civilization first live and grow in the irrigated lands of the Mediterranean and the Euphrates?

Southern California is included in the stretch of territory on the coast from Santa Barbara to San Diego; and the curving shore-line from Point Concepcion is sheltered to a large extent from the Pacific gales by a line of islands which have been made into favoured summer-resorts, and such places as Avalon and Santa Catalina have become famous for their attractions. A description from a Californian source says: "In the Bay of Avalon, children paddle about unattended in boats that they cannot upset. Indeed, everybody goes rowing and bathing here. There is no surf and no wind, and so clear is the water that all the wonderful vegetable and animal life on the bottom of the ocean may be seen through a glass-bottomed boat, as if the water were of crystal. Seals (sea-lions), unmolested, clamber on the rocks. It is a wonderful fishing-ground, and on a summer morning a fleet of rowboats and naphtha launches may be seen outward bound in search of the giant sea bass (reaching a weight of five hundred pounds), the leaping tuna (gamiest of all fish), the frolicsome and plentiful yellowtail, the albicore, the barracuda, the bonito, that philosopher's fish, the grouper; the white and rock bass, the halibut, and other denizens of the salty deep. An expert shot hunts the flying-fish. In the height of the summer season there are often five thousand or six thousand people on Catalina Island. There are a number of good hotels, but the tent villages, with their macadamized streets, and with rows of shade trees, are very attractive, and here the crowd lives. The furnished tents are rented very cheap, and, at the delicacy stores, dinners hot from the range may be purchased inexpensively. Illuminations, nightly concerts in a fine pavilion, dancing, a skating rink, make life very pleasant upon the island." Here, then, good reader, are miniature Blackpools and Scarboroughs upon this Californian coast, where the early Spanish navigators beat against fierce gales four hundred years ago. Near here an important Pacific Coast seaport is being created, at San Pedro, by means of a great breakwater and by dredging the inner harbour, so affording Southern California an entrepôt and shipping centre, which it formerly lacked.

The coast range of California has become broken down in the southern territory in many places, leaving the interior

SOUTHERN CALIFORNIA : SANTA CATALINA ISLAND

ORANGE TREES, MISSION BUILDINGS, AND PERPETUAL SNOW

open to the sea with an extensive plain 150 miles in length. This great *mesa*—the Spanish topographical term is used in California—extends from the shore back for a width of twenty to fifty miles, its structure then merging in the foothills of the Sierra Madre and San Bernardino mountains, which are the equivalent of the Sierra Nevada of the north. The culminating peaks, crowned with perpetual snow, rise to an elevation of twelve thousand feet above sea-level here; latitude 34° N.

The variety and resource of the region is very considerable, and it may be looked upon in some respects as one of the most favoured parts—not only of the Great Pacific Coast, but of the whole world. A land of everlasting summer—three hundred days of recorded sunshine; of eternal snow and orange groves; of smiling valleys and wind-swept deserts. Here also is the home of the American plutocrat cheek by jowl with the romance of the Spanish Mission and the Indian *pueblo*, or village. Great sea-beaches and gentle surf; hot mineral springs and cool artesian wells; ostriches (imported from Africa), humming-birds and meadow larks; roses and flowers; and mountain fastnesses where the roar of the mountain lion is heard; salt plains two hundred feet below the level of the sea—all these are features of this singular country. So dowered of nature it is, with climate, scenery, and plenty, that one might think a special race of virtuous men should have arisen to people it! I cannot truthfully record, however, that I found such to be the case as far as my observations went, with all due respect to its worthy inhabitants.

An American writer, full of the beauties of this “promised land,” asks why novelists should lay the scenes of their novels in Andalusia or in Devonshire. This expresses in another form the impressions I have given elsewhere, as to man and his lack of traditional or romantic connection with his environment. Nature may be as beautiful as we wish, but without the element of time and history it cannot form the background for a “novel.” Yet Southern California has a link with the romantic past which no other part of the United States has, although it is only of the past of a few centuries ago. For this is the land of the picturesque and interesting Missions, as we shall see: and it has produced a famous novel.

As we journey along the Southern Pacific Railway from the coast and Los Angeles, a number of snow-clad peaks come into view, such as that of Mount San Bernardino, 10,630 feet; Mount San Gorgonio, 11,485 feet; San Antonio, 10,080 feet; Mount San Jacinto, 10,805 feet, and others of lesser altitude. Here we reach one of the most interesting regions of California, that of the old Spanish settlements. The mission of San Gabriel was founded in 1771 by the *padres* Somero and Cambon, from Mexico; a handsome pile of stone buildings, and the ancient bells hanging in the arched belfry at its eastern end still call worshippers to service. The oldest orange grove in the country is found in its gardens; and one of the largest grape-vines in the world. Peaceful and old-world, this Mexican mission, whilst it is in marked contrast with the busy cities near at hand, is in equally marked conformity with the landscape. Similarly antique, or rather older, for it was found in 1769 by the *Padre* Junipero Serra, and is the oldest in the country, is the San Diego mission. The San Juan Capistrano mission was founded in 1776, and partly destroyed by an earthquake in 1812; and the massive ruins of its former beautiful walls and high bell-tower attract the traveller's attention. There are several other interesting missions of more or less similar character at no great distance from Los Angeles, such as San Buena Ventura, San Fernando, San Luis Rey and Santa Barbara. The last-named is of cut stone, with heavily buttressed and solid walls, and two-storey towers with a chime of bells. The monks inhabit it and tend their garden as they did generations ago. The mission buildings are seen from the sea; and they form one of the attractions of the adjoining city of Santa Barbara, which is one of those favoured spots of man's work and nature's environment such as have made Southern California justly famous. The beautiful valleys in this neighbourhood, alternating with rolling hills and glimpses of sunlit ocean, overarched by the blue sky, certainly form alluring havens of refuge upon this Great Pacific Coast. As to the old missions, it is pleasing to record that they are generally preserved with care, and, indeed, are looked upon with affection by the present dwellers of the land, the Anglo-Americans, who have created its wealth and prosperity. The

SPANISH MISSIONS OF CALIFORNIA
MISSION SAN GABRIEL. MISSION SAN BUENA VENTURA.

missions recall an interesting phase of civilization in America in this remote region, a civilization which the Franciscan friars were striving to implant among the poor Californian Indians, contemporaneously with the more strenuous growth of America on the Atlantic. Who at that period ever supposed that the great republic would extend to the Pacific Ocean?

The architecture of the missions—partaking of that of Italy, Grenada and Mexico—has greatly influenced the style of building in California, and the characteristic “mission” style is encountered throughout the state in private dwelling, public hall, or country house. To these early centres of civilization California owes, in origin, her olives, vines and oranges, and her art of wine-making; as well as the soft Spanish names which mark out the places of the state from all her sisters of the union with a romantic and distinguished nomenclature. Indeed, the railway in California does but follow the old trail between these missions for hundreds of miles; whose valley-settlements full of corn, wine and oil, and flocks and herds like those of the Holy Land, were at a day’s journey apart.

The wealthy American builds himself exceedingly luxurious homes in his Californian surroundings, and loves to introduce some ancient copy therein; for the American, deprived of history, loves that of other lands. I knew a Californian who was about to build a house with a large banquetting hall, modelled after that of Haddon Hall. Could I—being an Englishman—undertake to make a drawing for him? he asked; and he brought out a photograph of the interior of the famous Hall. He had never been outside California himself, but when I told him that not only did I know the Hall but that an ancestor of mine had laid claim to it as his property (unsuccessfully, however), nothing would please him but that I should make (at my own price) some drawings for his builders! This I did, and I believe the banquetting room of Haddon Hall was duplicated there!

Numerous growing towns and “garden” cities have sprung up in this region. Due to the clear atmosphere, Mount Wilson and Mount Lowe have been selected for astronomical observations, and the latter is ascended by an inclined railway

which forms a tourist resort. Pasadena and other handsome places, such as Redlands, have come to being where nineteen years ago a barren hill-slope, inhabited by horned toads and cactuses, existed. To-day it is a city of more than ten thousand people, with beautiful surroundings, possessing boulevards, electric trams, stone buildings, libraries, and all else that civilized man can create. So has the Californian desert blossomed. Los Angeles is the capital of Southern California, and is in some respects a remarkable city. It lies but a few miles from the coast, built on a group of low hills, and, like all these places, is traversed by good streets, with electric trams or street cars. Of remarkably recent growth, the city has become an important centre: "sky-scrapers" rear their tower-like structures upwards, and beautiful suburban homes attest the profits accruing to the citizens from the business performed in the tall offices and warehouses. There is a general air of prosperity about these places, which the semi-tropical foliage and warm climate add to. To the foreigner, accustomed to the harsher colour of life, these places seem almost too smiling and prosperous, as if they had more than their share of this world's good, without having adequately suffered and worked for it! Also, as in all Anglo-American communities, the churches are dwarfed by the business blocks, and in California the voice of the Angelus is drowned in the roar of the cities.

If there is one word to which the Californian pins his faith it is the word "fruit." The fruit-growing industry of California—a country which little more than half a century ago was, in its greater part, a wilderness uninhabited by civilized man with the exception of a few Spanish missionaries—is a veritable phenomenon. The transformation from sterile plains and sandy deserts to orange groves, orchards and vineyards, whose serried rows of fruit-laden trees are positively lost in the horizon at times as we look at them, is due to one agency—water. The sterile-appearing soil of the valleys and plains of the Great Pacific slope—not only in California but in British Columbia, Mexico, Peru and Chile—show a remarkable latent fertility under the influence of water; and artificial irrigation has been the agency which has rendered more service to man in those vast regions of Western America than any other branch of engineering science.

AN ORANGE GROVE IN CALIFORNIA

The Californian orchards are things to marvel at. Taking our stand upon some eminence overlooking any of these innumerable valleys and sub-valleys we see countless lines of orange trees, lemon trees, grape vines, prune trees, peach trees, fig trees and other fruits, extending away to where the rows are lost in the haze on the other side of the valley, where the fertile soil ends against the bases of the stony hills which form the rim of the basin. Each row is laid out with almost mathematical precision, whilst brimming irrigation ditches, conducting the water from some river beyond the range, discharge their life-producing contents into the trenches which, passing down each row of trees, feed them individually in an intensive cultivation. No dweller in Britain can imagine the beauty and importance of these Californian fruit groves and the pretty, busy towns to which their industry gives being, until he has visited them. Then he will compare the moss-grown and neglected orchards of Devonshire therewith, and wish that the sturdy British farmer would wake up to the possibilities of fruit-growing and a home market. In Britain fruit can really only be eaten by people of means—it is too expensive for the working classes. So plentiful is it in California that I have seen car-loads of pears thrown into San Francisco bay in order that the sacks might be used for some higher-priced fruit. I once had the contents of a seventy-five acre vineyard in California—fine grapes in full maturity—offered me for seventy-five cents! It must be explained, however, that this particular vineyard was remote from means of transport, and so the grapes would not have paid for picking and carriage. The crop was not lost, however; for a herd of pigs was turned in to fatten on the fruit. Think of it, ye poor of London slums who eye longingly the musty apples in greengrocers' shops in London's winter! Man in California has solved the problem of production, but not yet of transport or distribution. Even the plentiful Californian prunes—something like two hundred million pounds of fruit per annum, which form so nourishing and pleasant an article of diet—can only be obtained in England at sixpence per pound, and even then the enterprising grocer seems often to get hold of the poorest and driest specimens of all!

The Californian prune is a large sugary plum, and comes

to much perfection in the alluvial soil of these valleys, which result from the washing-down of the mountain slopes. The climate, of a certain temperature and dryness, suits the fruit exactly. Prunes are generally grafted on to young peach trees; they blossom in March, and their endless rows in flower give the great orchards the aspect of being under a snowfall. The first crop is yielded after three years from grafting, ripening in August, when they turn a deep blue. The curing or drying of the fruit is performed by placing it for a few moments in a bath of hot water and alkali, which slightly cracks the skins, when they are placed out on wooden trays in the sun, and left to dry for about a week. I know something about it from having followed the process on the spot. After this they are packed. One pound of dried prunes is produced from about $2\frac{1}{2}$ pounds of green fruit. In California there are some sixty-two thousand acres of prune-bearing orchards, the general disposition of the trees being about a hundred to the acre, and each tree varies in its yield up to eight hundred pounds of fruit. Somewhat different methods are followed with the peaches and apricots, which are cut in half, treated to a bath of burning sulphur fumes and exposed to the sun as before. Acres of the wooden, fruit-covered trays are to be seen at fruit-curing time, and the industry provides work for a considerable population.

But the crowning glory of California is her oranges, which spring from the alluvial soil in golden rows—often the very soil which is impregnated with fine metallic gold, such as is recovered by dredging on the flats. The largest citrus fruit-growing industry in the world is found in Southern California, to the east of the city of Los Angeles, in the well-known Riverside valley. Riverside sends away six thousand car-loads of oranges per annum, and it is calculated that the average wealth *per capita* of its inhabitants is greater than in any other American community. The Magnolia Avenue of Riverside has become famous; and, indeed, the whole valley, with its thousands of luxurious orange groves and irrigation system, all under conditions of climate, scenic beauty and easy conditions of life, may rightly be described as unique. Of similar character is Redlands, a typical horticultural community with a thousand acres of

flower-nurseries and twelve thousand acres of orange trees, both forming exceedingly lucrative industries for its inhabitants. The valley is backed by the snowy peaks of the San Bernardino range, rising from 7,000 feet to 11,500 feet above sea-level. The orange which has made California famous, and is one of her main sources of wealth, is the well-known seedless, or "Washington navel," which was brought from Brazil in 1869. Whilst its origin is considered to have been due to some accident of natural development, it has shown no tendency to revert to the type of its ancestor, the ordinary orange with seeds. Ten acres of Californian orange grove yield, in the sixth year, a value of £600 or £700 per annum, it is stated.

Water is the agency which has performed all these wonders of horticulture. The mountains and valleys of California have provided almost unique conditions for the storage and utilization of water. Great reservoirs in the mountains where valleys have been dammed up to form artificial lakes; hundreds of miles of main and subsidiary canals, conducting the water therefrom, taking their sinuous course over steel aqueducts and stone arches and through leagues of wooden or iron piping; innumerable artesian wells, where, at a short distance below the surface, nature has disposed an underground flow; huge flumes, carried for league after league through cañon, mountain and forest; and tunnels driven into hill-slopes to tap subterranean springs therein—all these we have encountered in our journeys, and the science of water-supply is so developed and important in California, and so varied that the magic word "hydraulics" might be blazoned on its scutcheon. Thus is the insufficiency of the rainfall overcome. In a remote valley I found an old man driving a small heading or tunnel into a stony hill. A gold-mine? No; far from it! Yet a gold-mine in a sense, for he was burrowing into the hill to find water—a common method in California—and the stream when tapped would yield him a gold-mine of an orange grove on the bit of arid plain at the foot of his hill, where his humble shanty stood. There is a charm and fascination to the engineer in this making of canals and ways for water around hills and through hill-spurs, across cañons in flume or syphon far away from the head-

gate in the mountain channel—a charm, I say, greater, perhaps, than that of any other work of the engineer. The “treasures of the snow” are yielded up in obedience to the dictates of the theodolite and the shovel—an ode and elegy to nature and to the efforts which man may make in his conquest of the desert!

Wine is a famous product of the Pacific Coast—California, Peru or Chile. Whilst the wine-makers of all these countries continually assert that their product is equal to that of European wine-producing countries, this must be looked upon as scarcely proven. Splendid wine is produced in California, Peru and Chile, but it is to be recollected that the vine is not indigenous to America, as it was implanted there less than four centuries ago by the Spaniards. Wine-making is the growth of ages, and it is not to be expected that the few decades of the Californian industry should yet be able to usurp the slow growth of time and experience of Europe. In this, as in other matters, America must wait the lapse of time before she is at the level of old Europe—whether it be wine-making or the making of literature and character.

Similar remarks hold good to some extent with regard to fruit in general. The orange was another Spanish gift to America, and whilst it comes to great perfection of shape, size and colour on the Californian slope, it is not necessarily the equal in flavour and aroma of the oranges of older regions. I know the Californian will protest, but the irrigation of fruit, whilst producing magnificence of appearance, does not always produce flavour. Perhaps Dame Nature is too much caressed in these orchards! Irrigating and cultivating are scientific and perfect, but Nature is not always to be wooed, and sometimes the half-neglected orange on a stony hillside is of finer taste than its great juicy cousin of the tended orchard. The same holds good to some extent with flowers; and the huge, magnificent Californian violet has not the aroma of its modest cousin, the British wood-violet. Even Pliny wrote that olives flourish best on stony hill-slopes, or amid abandoned ruins! Perhaps oranges are like men and women: when they are too carefully nurtured and too prosperous they tend to run off to belly and raiment!

MAGNOLIA AVENUE, RIVERSIDE, CALIFORNIA.



VII

THE PEOPLE OF CALIFORNIA

CALIFORNIA, politically, is one of the states of the Federation of the United States, and was admitted to the union in 1850. But the first we hear of California, as already described in the historical sketch, is after the time of Cortes: the exploration of the indefatigable Jesuits, who founded their missions there and laid the basis of European civilization there under the ægis of Spain. Elsewhere I have given a brief description of the missions remaining to-day. The state is governed by a state governor and state legislature, after the manner of all the political divisions of the United States; and all the machinery of government and law-making—as regards those laws which are of a local nature—exists, and operates from the handsome state capital of Sacramento, upon the river of the same name (reached both by rail and steamer from San Francisco). All the political and legislative officials are nominated by direct elections, which are carried out at the time of the general presidential election of the United States. The state entirely controls its own internal affairs, except as to matters which come under ordinary United States law; but all international conditions are under the control of the Federal Government at Washington. It is not often that any clash occurs between the individual state and the supreme Government; but an instance was furnished recently in the matter of anti-Japanese legislation, when the federal authority had to be asserted.

California is divided for purposes of government into fifty-seven counties, with a total area for the state of 158,360 square miles, and a total population of 1½ million inhabitants. The state is bounded on the north by the state of Oregon; on the east by the Sierra Nevada and the state of Nevada; on the south by the republic of Mexico (Baja or Lower

California); and on the west by the Pacific Ocean. "From Siskiyou to San Diego; from the sierra to the sea," is the Californian poet's definition of the state environment—those being the names of the northernmost and southernmost counties respectively. California is divided topographically into two main regions: Northern California and Southern California, as elsewhere described. Of the fifty-seven counties more than forty bear Spanish names, such as Los Angeles, Contra Costa, Alameda, San Bernardino, Santa Cruz, Mariposa, etc. (at least ten have the designation of saints, whether male or female). Each county has its county seat or capital town, and the principal have already been named. The population of San Francisco is 350,000; that of Los Angeles 300,000; Oakland 200,000; whilst there are some eight or more county towns with 10,000 to 25,000 inhabitants. The foreign-born element is about twenty-five per cent. of the population, for California is a very cosmopolitan state. The Chinese account for about three per cent., but negroes are few. "The Chinese must go!" has long been the cry in California. I once witnessed a procession of unemployed in San Francisco streets, and a banner carried displayed the sarcastic legend, "Melican man must go!" The "Melican," it must be explained, is the Chinese word for "American."

The English and Spanish-speaking people have both combined to a certain extent to produce the Californian; but the Anglo-Saxon predominates, and a type and individuality has become evolved to a certain extent. The indigenous tribes, the Indian people of California, have not blended with the Anglo-American race, except in a few instances *viâ* the Mexicans, who were the former owners of the lands, and who remained after the American occupation. There is, indeed, a great difference between the Anglo-American and the Spanish-American. The first forms no mixed race with the Indian, whilst the second forms it so strongly as to constitute it the basis of their population and a new nationality, as in Mexico or Peru.

There is another marked difference between the Californian and the Spanish-speaking peoples who inhabit the Great Pacific Coast for eight thousand miles southwardly—they are not divided by class distinctions. In this they are much more

truly "republican" than their southern neighbours. There is no aristocracy as in Mexico, Colombia, Peru or Chile, and no half-breed, or *mestizo*, class at all, except the remaining Mexican element. It would be impossible that such could arise or have arisen in a community such as California, whose elements of population are subject to constant interchange with the rest of the United States; for, notwithstanding the barrier interposed by the great Sierra Nevada, men come and go between east and west on the great trans-continental railways; so that ideas are always in a state of flux and habits general. The Americans are a remarkable people for travelling. They are ever running across their continent and up and down it with the activity of ants, with one underlying motive—business. The powers of modern usury are eloquently depicted in American railroads and hotels, and the ceaseless restless life of barter which is the soul—at present—of these remarkable people. This constant flux and movement naturally prevents the crystallization of the Californian into the distinct nationality which their geographical environment and history might otherwise have induced; although, as mentioned before, there is somewhat of a Californian type in being.

In addition to the profuse Spanish nomenclature in California, it is interesting to note the place-names given by the Anglo-American (of course all the Spanish names are not necessarily of early Spanish origin) and other settlers and "boomers." No doubt where it was possible some local and topographical designation was selected; but in a great many cases nothing of the kind existed, and the baptism of any particular spot resulted from the imagination of its particular sponsor. Thus taking at random the names of small stations on the Californian railways, we find such places as Snowdon, Grenada, Dunsmuir, Red Bluff, Durham, Germantown, Palermo, Ely, Newcastle, Dutch Flat, Gold Run, Blue Cañon, Crystal Lake, Cicero, Poverty Flat, Chinese, Yarmouth, Emerald, Delhi, Ceres, Livingston, Arundel, Geneva, Athlone, Firebaugh, Wheatville, Exeter, Tipton, Basalt, Bengal, Siam, and a host of others. Whilst upon the railway that reaches out upon the great Mojave Desert we find such suggestive names as Pisgah and Bagdad! Truly these

names of places, given for all time, speak eloquently of the variety of race and thought of the new peoples of California and the West. Even the end of this mortal coil seems to have been reached in Tombstone, Arizona!

The language spoken in California is, of course, English. Spanish, however, is spoken largely by the considerable Mexican element, and in San Francisco there are, or rather were before the earthquake, colonies of Italians, Greeks, Spaniards, French and other people who retained their own languages and customs generally. There was in addition the Chinese quarter, or "Chinatown," which, however, has been removed farther away in the New San Francisco which is arising from its ashes. Another remarkable foreign feature in San Francisco was the congeries of streets or alleys containing numerous small dwellings inhabited by the *demi-monde*; women of French, Japanese, Spanish, Italian and other nationalities who existed under the recognition of the law as customary in some countries, and who wore their national dress and played their national musical instruments in their respective streets in view of the public.

In Western Anglo-America, in popular parlance, the various European or American races are grouped under two main headings—"Dutch" and "Dago." "Dutch" is the slang term for all people of German, Holland, Scandinavian (Sweden, Norway, Denmark, etc.) origin, whilst "Dago" covers the Latin race, including Spaniards, Italians, French, Mexicans, etc. These are, of course, unofficial or slang designations.

The Californians as a people are of marked European type, white, of good stature and physiognomy, vigorous and enterprising. The women generally are handsome and vivacious, and are perhaps more of a special type than the men. California scarcely partakes of the character of a pastoral community, such as Mexico, nor is there the same custom of hospitality to be encountered in the interior as in Spanish-America. The character of the people, to British eyes, seems overshadowed at times by the almost aggressive incivility and cynical shrewdness common to the Western American, which often hides their otherwise good qualities.

How do the people of California as a whole impress the foreigner? In the cities they are much the same as any other

citizens of the United States or elsewhere. But there has always been in political centres a strong element of low and unscrupulous office-holders; and, remarkable as it may seem, some notorious rascals have held the highest places of civic authority. "Graft," jobbery, corruption and the saloon element have dominated San Francisco politics as they have so often controlled those of Chicago or New York,¹ and the educated foreigner is always struck by the low type of man who holds city offices. The sinister shadow of Tammany stretches right across the continent, and it must be long before the American people reach higher ideals in public affairs. American cities and politics are honeycombed by the vile methods of low-class politicians: a web of civilized savagery which, if it continue, would seem only expurgeable by some visitation of wrath from above. Nothing can be more remote from ideals of justice and liberty such as the worthy progenitors of the nation, whether Pilgrim Fathers or the educated or exemplary settlers of New England, nourished, than the low criminal standard of civic duty which has taken possession of this "free" nation. That clean new civilization which a clean new world might have been expected to produce, and the real principle of brotherhood of man, which, saying they found it not in the Old World, the pioneers set out to establish in the New: where is it? America has had a unique opportunity in the history of the world for a step forward towards the millennium. Has she made it? It would be kindest not to press these questions too closely. The United States civilization is in an unlovely phase of its development, and perhaps when the fevered dream of "get-rich-quick" is past, when the tawdry "society" class, aping the ancient world of Europe, has turned to something nobler, then will refinement and honour be held in esteem.

It is not to be supposed that this bad element which controls American municipal politics in California is typical of the people at large. The Californians consist of a great

¹ "After investigation the Mayor of New York has issued a report which denounces the police administration as a corporation which systematically violates the law. The report has created a profound impression. The Mayor has taken the police administration under his own control." *Vide* the press, July 1, 1909. This is only part of New York's history.

bulk of sober, God-fearing people, respecters of the law and upholders of decency and order. Indeed, it happens at times in California, as in New York or Chicago, that the good citizen arises in his wrath and numbers, and going to the poll at election time kicks out the rotten element and substitutes a better one, more representative of his own class. Unfortunately, however, his apathy is not easily overcome, and the insidious "Tammany" element does but lay low and bide its time, and by means of the remarkable organization of its nefarious forces does not long delay in getting hold of the reins of government again, and in controlling the public funds to the benefit of its own pocket.

The Californian women present one feature to the observer ever presented by American peoples—they are much more refined than their men. This is not necessarily a matter for surprise, for California has not yet had time to produce a refined leisure or professional class, such as is the powerful social feature of Britain. Californians are workers generally, and what leisure class does exist is still very much in course of development. Until recent years many of the exceedingly wealthy men of the state, even the millionaires, were men of relatively small education, and in some cases were even illiterate. This was not their fault. They were men often who sprang from the early pioneer class, and from their enterprise had amassed wealth. Among some of California's well-known millionaire names, past and present, have been men of poor Irish extraction, who sought their fortunes in early days and grew up with the state. Remarkable it is that the Emerald Isle, in the far-off North Atlantic, should have furnished the material for these new centres of wealth upon the Great Pacific Coast!

There is a certain condition which seems to present itself to the British observer in California and America generally—the Anglo-American is not in harmony with nature. He seems too new, too aggressive, too uncivil. You do not get this impression in Europe, either among its peasantry or its upper class. Nor do you get it in Mexico, or any other part of Spanish-America. The Anglo-American with his oaths and overalls, his "I-am-as-good-as-you-and-probably-better" air and manner, his disregard or ignorance of native

refinement, all go to render the American civilization—in European eyes—something singularly apart from the land itself. Nowhere do you find this so strongly marked as in camping, or hunting or in the country districts generally. The rude fellow you have hired to assist you bristles with aggressive equality. It is not that you want to patronize or bully him, for the travelled Englishman in other countries makes friends of his dependants, but no such friendship is possible in America, where the relations of employer and employed are but a system of armed neutrality which frequently breaks out into open warfare. In our journeyings in Western America one of the greatest reliefs we can experience is to exchange the American boor for the courteous and careful, if less honest and reliable, Mexican. From the American waiter who bangs your plate down in front of you at the hotel, or the post-office clerk who sells you stamps and almost insults you if you ask for information, down to the ill-dressed, ill-mannered denizen of the tumble-down ranch you may seek to obtain refreshment at in the wilds, all are imbued with this spirit. You approach a handsome country estate, thinking that the owner of the place must surely be a man of such refinement as in Britain, Spain, France or Germany would greet you. You are mistaken. He may be a good fellow at bottom, and very often is, but his courtesy, if he has any, is of the bluffest. You think at first he is assuming this as an exterior; but you find that he was born so, and, like the Ethiopian, cannot change his skin. Then it dawns upon you how relative a thing civilization is. The old lands where robber barons reared their strongholds upon the hills and where the people groaned for years under kingly rule, and which have grown chastened by bloodshed and sacrifice—those are the countries where also the true qualities of the gentleman, whether lord or peasant, have come to being. Only time can produce the gentleman; time, suffering and the chastening hand of Providence; and these America has been largely spared at present. Apart from these matters the Western American is industrious and honest, and if less courteous he will not generally play you tricks like the Mexican and the Peruvian. Indeed, when we take into account the rude and even criminal element

which was drafted into California at the time of the gold excitement we shall rather be astonished that so sober a people have resulted. Of course the bulk of the people have immigrated to California of much more recent years.

The Sunday edition of the newspapers of San Francisco, like those of other American cities—New York or Chicago—are great unwieldy periodicals, often containing as many as sixty full-sized pages. These pages may be divided into three classes: news matter, illustrated matter and advertisements. The first are the cabled and other news, political and industrial, home or world-wide, collected with characteristic enterprise, and served up in that sensational and slangy fashion beloved of the American pressman; the second consists of page after page of cheaply executed and astonishing rubbish in the form of highly-coloured series of picture-incidents, whimsical, burlesque, vulgar. How a nation of serious-minded people can tolerate this wad of rubbish every Sunday passes the Britisher's comprehension—for it is on Sunday that these great papers are mainly issued. Presumably these illustrated pages are intended for children—alas! for children whose minds are nourished on such pabulum. As to the ordinary news matter this is often of considerable and varied interest, upon every conceivable topic and from all parts of the world; interest which, however, too often is sacrificed to veracity. The "scare headlines," as the headings of columns or paragraphs are termed, and the chopping-up of the columns and pages with badly-executed sketches, portraits of individuals and advertisements render perusal of the paper almost bewildering, a style which is adopted to draw attention but which defeats its own end. These American newspapers are immeasurably below the moral and literary standard of British periodicals, but in this sense they and the people probably reflect each other as a whole. These criticisms are not made in any ill-natured sense, and the facts are palpable to any observer. The American newspapers reflect a vast, throbbing, varied life of millions of people, many of whose ideas are semi-savagery; a vast people in the making, whose variety and colour time will yet sort out into harmonious and civilized blends, for underneath it all is the undercurrent of Anglo-Saxon morality which, often

in spite of, rather than as a result of social customs, is forcing its way upward. This great undercurrent the Americans have inherited as a British legacy—their common heritage in the scheme of nature, however much some of them may pretend to deny it. Some day all this rubbish of Sunday newspapers will be burnt and a cleaner literature evolved. As to the advertisements, especially those columns of small “want” advertisements, their number and variety is astonishing; ranging from the ambitious young man who asking for employment sets forth his own unique personal merits, to the quack “medium” who draws attention to his fortune-telling parlours or his *séances*. The news headings of a great American paper show, to the foreigner, with startling interest, the throbbing of the life of these new cities, more so than could any essay or description from the pen of the traveller. I will produce a few of these, torn living and verbatim from the pages of a Sunday number of the *San Francisco Chronicle* of this year of grace, 1909. As will be seen, they deal largely with lawlessness; but they are not selected for this reason.

“Fools Sheriffs in two Cities”: an account of a famous actress and her leading man, who evade the Californian process-servers for old debts. “Secretly weds his House-keeper”: this explains itself. “Given a Week to find Client”: the attorneys of a man charged with felonious assaults on young girls are allowed some days to produce their “client.” “Japanese object to pay Poll Tax”: an account of the abandonment of their work by 450 Japanese employed upon a beet-sugar growing estate due to the attempt to tax them unduly. “To mark the Temperance Apostles’ Grave”: an account of a tablet placed on the tomb of Murphy, a great temperance advocate, who is buried in Los Angeles. “Maniac causes Triple Tragedy in New Mexico”: a workman (with an Italian name) goes mad and murders his family. “Had two if not more Helpers; One of the Three engaged in looting the Treasury seeks Immunity”: account of a trial, before the Grand Jury, of some city officials who looted the city treasury after the earthquake in April 1906. “Brutal Crime is suspected when Child is found Dead”: an account of some suspected outrage upon a little

girl by a labourer; both of Italian name. "Makes his Son the Subject of a Memorial": a father writes a book upon his son, who was lost in the Sierra Nevada. "Orders for the Army": contains a list of army officers ordered to the Philippines. "Blow up Safe and wreck Building—Robbers loot Palm Saloon on San Bruno Road of a Large Sum—Eleven Shots fired by Thugs, who resent Interference with Work": an exciting account of a burglary with violence at a country roadside inn. "Architects must have Licences": the decision of a Californian court to that effect. "Repairs for the *Sherman*": an account of the repairing of a trans-Pacific transport for the Philippines. "Bolt of Thunder breaks over City": a great thunderstorm over San Francisco which causes people to rush out of the hotels and theatres. "Foil Attempt to break Jail—Three Desperate Prisoners at Martinez try in vain to Escape": an account of three well-known criminals, post-office robbers and safe-breakers, all with Anglo-Saxon names, who had been captured red-handed. "Wagon is run down by Train—Men fatally injured at 'Death Curve'": a level-crossing accident. "Divorced Wife may now bring another Law-suit": a lady recently divorced has commandeered some of her divorced husband's property on an order of court, and proceeds to marry another wealthy man. "Veteran will conduct Funeral": veteran soldiers of the Spanish and Philippine war bury a comrade in Oakland. "To sing in the Greek Theatre": account of a lady singer who will give a concert in the Greek theatre of the University of California. "Social Events across the Bay": description of the doings and movements of "Society" people in the pretty residential town adjacent to San Francisco: the small Society doings in which American papers delight. "Aged Men die of Starvation": two men (of Anglo-Saxon name) die miserably of starvation and disease in a wretched hovel in a district "dotted with the houses of the wealthy and fashionable." "Riddles Heart with Buckshot": describes the suicide of a despondent sea-captain of Scandinavian name. "Plans for New Dock at Pear Harbour, Hawaii": outlines a project for a dock in the Sandwich Islands, which are, of course, under the American flag, two thousand miles westward of San

Francisco. "Railways to attack the Two-cent Law": action brought by railway companies to set aside the two-cent per mile passenger fares in the Middle West. "Charged with Wire-tapping": four men (of Anglo-Saxon and German names) arrested for obtaining racing news at Berkeley, in a room over a chemist's shop, by the method of attaching a wire to the telegraph line, a common and ingenious form of crime heavily punishable in the United States. "Thief robs his Fiftieth Victim: Bogus Insurance Man robs another Home, and Women complain": an account of an ingenious thief. "Urge that Suffrage be granted to Women": a Church temperance meeting at Oakland for that purpose. "San Rafael Women aid Boosters materially": this singular announcement would not be intelligible to English readers without its context, which describes the efforts of a local improvement or literary club. "Methodists to hold Exercises": the laying of a corner-stone by this religious body in Berkeley. "New Reading of Divorce Laws"; "Ex-Convict tells about Projected Bank Robbery"; "Splendid Spring Display of Fashions and Fabrics"; "More Restrictions for Building Contractors," are other headings upon these corresponding subjects; and then we come to a page devoted to motor-cars and accounts of their trips through the sierra and over the American deserts. "Counterfeiters are sentenced"; "Court decides Walker is not Bankrupt"; "Tree-planting at Glen Park"; "Irrigation Case compromised," are other items which tell their own tale. Then comes a page of foreign news, of which the headings are as follows: "Awaiting Heir to Dutch Throne"; "Foreigners kept under Watch in Germany"; "No need for Policeman in English Village"; "King Edward a Nervous Wreck": a stupid story about His Majesty's health. "Beautiful Girl who has just come out": an account of an English *débutante*. "British Naval Crisis—Britons in Alarm at German Peril cry for more Ships." "Duchess of Aosta to give Roosevelt Tips"; "No Limit on New York Sky-scrapers," and so forth *ad infinitum, ad nauseam*. Accounts of prize-fighters, "Society" people, summer resorts, racing news, travel articles on other countries; enormous advertisements, all profusely illustrated with prints, and

pages of small advertisements make up the mighty total. It is related of a man who was camping out in the wilds of Arizona that he complained of having lost his blanket, and the night was chilly. "Never mind," his companion remarked facetiously, "I have got a copy of the *New York Herald* here, and you can use it for a bed!" I do not know whether this was meant to illustrate only the size of that enterprising periodical or the "warmth" of its contents in addition! All the foregoing items are taken from a single Sunday edition of the *San Francisco Chronicle* and may be taken as typical of the news in that and other American papers; and the reader must, of course, apply the reservation to them which he would apply in less degree to the Press of other countries. I have not selected these items, but taken them as they came without any desire beyond that of drawing a picture of California as depicted by its own Press, and I give them as affording a racial and physiological study of the people.

The Californians are, indeed, drawn from all the white nations of Europe and from all the states of their own Union; and they are being continually augmented and modified from the outside, like all other of the peoples of the Great Pacific Coast. But their general character suggests their British origin; and, indeed, in some parts of the country, especially in the beautiful fruit-growing towns, there are numbers of British settlers, often men of means and education, who have taken root and, as ever, brought their customs and atmosphere with them. The Irish are much in evidence in California, and this is mainly the cause of the anti-British feeling which from time to time breaks out in the San Francisco Press. Indeed, it is remarkable how strong anti-British sentiment is among the Irish-Americans in the United States. Wherever an Irish-American is encountered there is an unreasoning enemy for England; and in Chicago and other places Britain is invaded and humbled with frequency at their meetings. Personally I think there is much foundation, or there has been in past history, for this sentiment. But most of these agitators know little of history—they are generally indulging a blind resentment. Many of them are wealthy; have they done

anything to better the conditions of their poor countrymen in Ireland beyond that useless one of subscribing to funds to stir up political strife?

I have referred elsewhere to the matter of Spanish influence and nomenclature in California, and Mexico and the Mexicans have taken a prominent part in Californian history. In earlier years race-hatred and rivalry between the Americans and the Mexicans was exceedingly marked, and can only be said to have died down in this century. Feuds, lynchings, robberies on the border and in the mountains of California were of everyday occurrence. The Spanish-Mexicans inhabiting California were of two classes. The first were the holders and owners of the great landed estates, or ranches, which they held from the Mexican Government before the American occupation of California, and these were men of a high class, who accepted American political control with a good grace, and were a valuable element in the country. The other class, however, included a vast, mixed horde of uneducated Mexicans whose instincts were generally criminal. The roads and trails in California were unsafe by reason of this element; murder and robbery were rife; the dance houses and "dives" they maintained in the towns and villages were hotbeds of crime and vice, and the mining camps during the latter half of the last century were refuges for predatory rascals fleeing from justice. These did not include Mexicans alone, however: they were drawn from every nation under the sun, and the real typical "bad man" of the West more generally than otherwise bore an Anglo-Saxon name, as does the cool and enterprising train-robber of to-day. Up to the year 1856 there existed in the small sierra town of Jackson, upon its main street, a famous oak which became a favourite gallows for the stringing up of thieves and murderers of that part of the country at that time. Nine malefactors, judged and executed by lynch law, had hung from its branches, and of these five were Mexicans and four of other races—a grim, cosmopolitan gathering typical of the time and place. Of the outrages perpetrated upon lonely ranches and Chinese miners by gangs of Mexican outlaws in those days a chapter might be filled. Accounts have been kept of the lynchings in 1851 and 1852, giving a total of

151 men executed by this method, ninety-seven of which were "Greasers," as the American terms the lower-class Mexicans. The following account, taken from a San Francisco paper, describing the doings in those early days of the fifties and sixties shows eloquently the condition of the country at that time, and the measures taken in self-protection for the expulsion of the criminal element among the Mexicans.

"In August 1855 the foothills blazed with excitement over a dastardly outrage perpetrated by a gang of Mexican outlaws at the little town of Rancheria, in Amador county. It was a small mining camp on Dry Creek, between Drytown and Fiddletown, containing an hotel, saloon and a number of miners' cabins, and with a population perhaps of a couple of hundred. Needless to remark that no trace of its existence remains to-day; blotted out like a thousand other ephemeral placer camps. For a week previous it had been known that a party of desperadoes was systematically robbing all the Chinese camps on Dry and Willow Creeks, having levied tribute on more than fifty of these places, murdering at least a dozen Chinese and cleaning up in its operation in the neighbourhood of \$25,000.

"A number of strange Mexicans had been noticed at a fandango house at Drytown, and, surmising that the strangers were a portion of the band, it was determined to arrest them. A couple of local officers proceeded to the premises, but the game, suspicious or forewarned, escaped by the back door and took to the hills, followed by a fusillade of pistol-shots, none of which took effect.

"There were nine of them, headed by their leader, Guadalupe Gamba, who took up the trail for Rancheria, where they arrived on foot about nine o'clock. There the party divided, five of them entering the hotel, where they at once opened fire on two men that were in the office, killing them instantly. The landlord came in from a back room at this juncture, and as soon as he opened the door he was shot down and left for dead. One of the fiends, Rafael Escobar, went into the sitting-room, where the landlady, half dead from fright, was listening to the noise of the fracas. She fell on her knees and begged for her life, but without avail; for

as her voice was raised in pleading tones he deliberately shot her in the breast, and, as she lay gasping her life's breath away, picked her up and threw her out of the window, where she afterwards was found lifeless.

"In the meantime, the other party of four went into the store, killed the storekeeper and two customers, rifled the safe and joined their comrades, who had robbed the hotel of all available plunder. The villains were on foot when they came to the town, but found enough horses to mount the gang, and, at the conclusion of the tragedy, mounted and fled from the scene. As they left the camp they met a lone Indian on the trail, and from pure wantonness killed him—an act that cost the Greasers half-a-dozen lives, for the next day the members of the tribe rounded up that number along the creek, and, imitating the white man, took their victims upon the ridge and hanged them to a branching oak.

"That same night the dead red man was cremated close by with the usual funeral ceremonies of the Digger tribe, and it was a most unique and ghastly picture. The old squaws, with dishevelled hair and tar-besmeared faces, circled the pyre chanting a funeral dirge; the bucks sat around in stolid silence, while the bodies of the Mexicans swayed in the breeze, the fitful flames now lighting up their horribly contorted faces as they twisted into the firelight, and again plunging them into shadow as they swung in the darkness. It was a scene from *Inferno*—a chamber of horrors, enclosed in the gloom of night.

"Alarmed by the reports of the pistol-shots, the outlying miners soon gathered in the camp, and took immediate measures to pursue and apprehend the assassins. Runners conveying the news were dispatched to Fiddletown, Drytown, Sutter Creek and Jackson. The sheriff and deputies organized half-a-dozen posses, who were sent out to trail in as many different directions; the country was aroused, and the people on the look-out in all sections. The foothills went wild with all sorts of rumours. Indignation meetings were held, and at each it was resolved to expel this class of population, men, women and children, guilty or innocent, outside the borders of Amador county. The excitement spread to Calaveras county, where similar resolutions were adopted,

and many fiery spirits counselled immediate and drastic action.

"Then it began to be whispered around that the slaughter at Rancheria was but the beginning of a concerted outbreak—the initial act in a deep-laid plot, which meant an uprising of the Mexicans, a culmination of the race-hatred that undoubtedly existed. While to the cooler heads this was regarded as improbable; still in numbers the Mexicans were formidable, and there might be a grain of truth in it. It was even reported that three hundred armed Mexicans from their camp near Jackson were marching on Sutter Creek with the intention of massacring the Americans, and the inhabitants in that place gathered the women and children for safety into the stone stores, while, armed to the best of their resources, they patrolled the roads and streets until daylight. Similar preparation for defence was made at Jackson and Drytown, and Calaveras county was up in arms.

"About fifty Greasers had been arrested and confined on suspicion, hangers-on at fandango houses and bad characters. Three of them, known desperadoes, were lynched at Drytown, and three more, who had been overtaken by one of the posses at Campo Seco, met a similar fate. One, who had made his way to Texas Bar, was discovered in front of a dance-house with a revolver in each hand, and he began blazing away as soon as the pursuing party came into sight, one of the members of which he wounded badly before he was shot down. He was not killed, and was taken over to Jackson, and before his death, which was hastened by a rope over the famous hangman's tree, confessed, and gave the names of his confederates. This fellow, Manuel Castro, gave information of the existence of a band, recruited by Guadalupe, numbering fifty, with the avowed object of emulating Murietta and stirring up the Mexican element to a revolution. The money secured by robbing the Chinese was to be devoted to the purchase of horses, arms and equipment. A sudden concerted attack was to be made upon Jackson, the town plundered and every one killed who stood in their way. This was to be followed up by swift attacks upon other towns, and if the forays were successful it was believed that a majority of the Mexicans would join in the movement,

Castro also asserted that the plot was generally known among the Greasers and that a majority was heartily in favour of it. The confession added fuel to the flames, and the determination was intensified to clean the undesirable element out of the country. At Fiddletown, Drytown and Sutter Creek the fandango houses and resorts of the Greasers were sacked and destroyed and the Mexicans given a stern warning to leave. In the vicinity of Jackson there was a camp of about three hundred, and this was visited by a mob of white men who, after arresting a dozen of the worst of the lot, known horse-thieves and suspected murderers, set fire to the shanties and scattered the inhabitants to the four winds.

"It was always a semi-mystery as to the fate of the dozen desperadoes. They were tied together with ropes and, guarded by a party of forty men, marched out into the darkness in the direction of Butte Basin. The escort returned in the morning and reported that the Greasers had been sent across the Mokelumne River into Calaveras county. The statement was only partially true, as not more than half of them floated over and lodged on the bars on that side of the stream. The fact was that they had been taken to a bluff overhanging the river, there shot to death and the bodies thrown over the precipice into the stream one thousand five hundred feet below. It was a grim tragedy, but it passed uncriticized and uncondemned. In the meantime the roads and trails were crowded with flying fugitives, men, women and children, and they did not halt until they reached the Stanislaus River. At least one thousand sought safety in Sonoratown, and many passed on into Bear Valley, in Mariposa county. Amador county was practically free of them, and the hegira from Calaveras was nearly as great.

"Notwithstanding the number of lives that had been taken, six of the villains were still at large, and the sheriff of Amador county, with a posse, was hot on their trail. Rafael Escoba, who killed the woman, was caught at Campo Seco, brought over to Jackson, and preparations were made to burn him alive; indeed, the miners went so far as to prepare a pile of cordwood on the main street for the pyre, but wiser counsels

prevailed and instead he was hanged, the fatal oak tree claiming another victim.

“Two more were found and identified at Carson Creek and sent back to Jackson for trial, but they never reached that town. As the leader of the guard remarked, ‘What was the use of taking the trouble to bring them back to where they were sure to be lynched when any of the trees along the road offered just as good facilities?’ which seemed to the members of the guard a very sensible proposition, so they halted on a little flat at the crossing of San Domingo Creek and relieved themselves of any further responsibility in the matter by stringing the couple up and leaving them for crow bait. This left three of the original gang, and news was brought to the sheriff that they were hidden at Chinese Camp, in Tuolumne county, a mining town a few miles from Sonora. Here they were found located in a tent on the hillside, which the party surrounded and ordered the desperadoes to come out and deliver themselves to the posse. For answer they fired a volley into the pursuing party, instantly killing the sheriff and wounding two others. Then one of the besiegers set fire to the tent and shot dead the first two that ran out of the opening. The last to appear was the arch villain, the leader, Guadaloupe Gamba, and as he came in sight, six-shooter in hand, he turned the pistol to his head and blew out his own brains. Swift vengeance had met the band, that is, the original nine who participated in the bloody murders at Rancheria. In less than a week they had been exterminated off the face of the earth. An exhibition of popular wrath occurred that night at Sonora, where a mob razed a portion of Greasertown and incidentally lynched three bad Mexicans. This ended the campaign, and the excitement soon died away, although for months afterward rumours would be circulated of contemplated Mexican forays, which, however, proved to be false alarms. The refugees returned gradually to their old haunts, the fandango houses were rebuilt and continued in operation until the exhaustion of the placers and the wane of flush times made them no longer profitable.”

Thus we have a glimpse, from actual fact, of what California was in the time of men living now; and an example,

contrasting it with the California of to-day, of how rapidly social conditions have changed upon the Great Pacific Coast. Incidentally the above account serves to show the style of writing of the San Francisco Press of to-day and "United States" as it is spoken and written in that enterprising country.

California is, of course, entirely different to-day, but nevertheless, the form of American "argument," the revolver and the shot-gun, are still much in evidence. This is generally a "sawed-off" shot-gun, as it is termed: the barrels being generally cut off short for convenience in handling at short range; and this effective weapon, heavily loaded, is seen in the hands of "Wells Fargo" and other "Express" agents, as they mount or descend the box of the stage-coaches which meet the trains at wayside railway stations, the arms being necessary against the depredation of robbers. For California and western North America generally still retains some of that savage indifference to "mine and thine" and to the value of human life which it has inherited from the desperadoes who thronged it in the early days. The oath and the revolver are much in evidence still, and the bank-robber and train-dynamiter still carry on their depredations in the midst of a growing civilization. The sheriff's "posse" and the law of lynch are both much in evidence as offsets to that cool-blooded crime which has become synonymous with the "wild and woolly West," and with the character of the Western American above all other races of mankind. Texas, Arizona, California—all partake of this singular phase of the white man's vices, and it must be long before the taint is lost. The "holding-up" of banks, stage-coaches and passenger trains is a form of robbery which seems to have appealed with singular force to the Western American thief. Men of this stamp will not hesitate to blow up a bridge so as to throw a train into a river in order to rob the "express" car, as the van devoted to the carrying of mail and valuables is termed in America; nor to murder the "express" messenger, or man in charge, by riddling him with shot if he refuses to yield to their demands. The method of these desperadoes, and it is of constant occurrence, is more or less as follows: one or more of their number conceals him-

self somewhere on the train or locomotive, and at a preconcerted place starts out, and, covering the engine-driver with a revolver, commands him to pull up. The mechanic has generally little choice but to obey, and the train is brought to a standstill, when the malefactor's associates—who may be only two or three in number—approach the train with drawn weapons and go through it, causing the passengers to give up their money and valuables. A sack is generally held open and carried along through the train by one of the robbers, whilst another “covers” the occupants of the car from the door—it is to be remembered that the American railway car is not divided into compartments, like the European—and in this way the passengers are terrorized and easily disgorge their property. They do not seem to show fight much: possibly they consider it would be useless, and the desperadoes, masters of the situation, would not hesitate to fire and murder any one who opposed them. Nevertheless, I do not think such scenes would be possible of repetition in a community of British people. Indeed, these outrages do not occur in British Western America, such as British Columbia. It is, in fact, characteristic of Americans that they have a less strong sense of individual rights than an Englishman or Scotchman: less public spirit. An American never “writes to the *Times*” to protest against this or that abuse, and “Pro bono publico” and “Paterfamilias” are almost unknown. Perhaps, however, the train-robbers have turned their attentions to the express car and commanded the messenger to come out; for he may have barred the door of the strongly-constructed vehicle. If he refuses the robbers detach the car and engine and run them a mile or so down the line, put dynamite underneath the car and blow it up; helping themselves to the money and valuables it contains, and then making off into the open country. Whilst, as stated, the passengers do not often resist, this is not generally the case with the train attendants, who at times make a gallant resistance. It is a common thing for the train conductor to seize a Winchester rifle and pick off the robbers at the express car if they relax their vigilance for a moment, whilst brave express messengers have often showed such effective fight

that the tables have been turned on the thieves, who have been shot down or put to flight. It is to be remembered that these acts take place in some wild lonely region generally, and escape is easy. Nevertheless, the next act is that performed by the sheriff and his "posse," who, warned at the next station, scour the country to arrest or wipe out the gang. In some parts of Western America the sheriff is a very busy individual indeed; carries his life in his hand, and has generally been elected to the post—for it is a political position—for his qualities of coolness and bravery. The last act is in the courthouse of that particular county and the desultory law against the captured criminals; for the arm of justice in America, judged by British standards, is tardy. The train upon which I was journeying on one occasion was "held up" by robbers in the night, but they had reckoned without their host, for there happened to be a doughty sheriff and some of his men in the smoking-car, and two of the desperadoes were shot down in the act, before the passengers were molested.

Whilst it is not to be supposed that any particular danger of this nature attends the traveller in Western America generally, there is nevertheless always the picturesque possibility. Incidents of travel upon these vast transcontinental routes of railway lines are full of peculiar interest. We may take our stand on the back platform of the Pullman car and observe unhindered the line and its surrounding landscape as it unfolds behind us as the train speeds along. Mile after mile, day after day, of arid plain, where the line, laid in long "tangents," stretches behind us without a curve to where it is lost on the horizon; or again, we are passing through a maze of tangled forest and swamp where the hoarse puffing of the locomotive resounds back in short echoes from the narrow clearing along the track. Further, perhaps, we cross a range of hills and the long tangent gives place to curves of short radius and steep inclines around and up which the train groans and the locomotive pants in eloquent expression of the energy it is employing to overcome the obstacles in its way. Presently there is a sonorous blast from the engine's whistle, and the train comes to a halt at some small wayside station, surrounded by hills in such a

way that it seems impossible the line can proceed further or get out of the enclosed valley. Especially is this the case on approaching the Rocky Mountains and the Sierra Nevadas; and, indeed, the skill of the civil engineer is nowhere better displayed than in the tunnels, loops, viaducts and spirals of these difficult regions. Running along the bottom of deep cañons, on a narrow track sculptured in the rocky wall, the line emerges to cross a giddy viaduct over a ravine of appalling depth, the structure trembling as the train passes over it, and plunging into the depth of a tunnel beneath a fir-crowned hill emerges thence to twist and climb around steep slopes, where from the gained altitude the vast horizon unfolds to our eyes as, fascinated, we hang on to the back rail of the Pullman platform. Again the scene changes. Smiling plains unfold, with a wealth of cattle and planted corn, and the habitations of man. The bell on the locomotive begins the incessant clanging which denotes approach to a town, and soon we are flying over the level-crossings of streets, and enter among the smoky chimneys and high buildings of some great city emporium of the Western world.

Just as in Spanish-America the traveller is inevitably thrown into an atmosphere of mules and mule-drivers, so in Anglo-America he dwells in one of trains and trainmen. There is a vast difference between the two conditions—differences of race and temperament as well. The Mexican or Peruvian *arriero*, or mule-driver, is courteous, picturesque, slow and dirty, yet capable in his way; the American trainman, conductor and brakeman are brisk, brusque, often offensive, rarely courteous, but capable and indispensable also. They represent the very antithesis of means of locomotion upon that vast sunset coast. However, even the American train-conductor is interesting at times, and often proves a good fellow. The first impulse of the American is to show you, whether you are an American or a foreigner, that he is as good as you—possibly better, in his own estimation: a trait born doubtless at the moment of throwing overboard the Boston tea-chests. As soon, therefore, as the tea-chests have been satisfactorily disposed of again he may reveal some agreeable and possibly gentlemanly manners;

and as for the English traveller there, he will recollect for his part that good-fellowship is better than starchiness and kind hearts more than coronets.

The developing civilization of California is shown in the strange anomalies encountered in her country villages. Rude pioneer habits and methods in some places go hand in hand with the amenities of struggling "Society" tendencies, with women generally as the cause of these tentacles of civilization being put forth. It is in the more unsettled parts of the world, perhaps, kind reader, that the fact is borne upon us that without woman man might develop into a savage. So it is in California. The rude train brakesman or the village blacksmith doffs his careless attire of labour and at holiday times dresses himself in a "smart rig-out" for visit or function where women will be present; forgets his brusqueness and his oaths, all of which matters are useful for him. In one remote little town in the region where I was camping there was a literary society, and the ladies of the place played, sang and recited; the village blacksmith proved his knowledge of Byron or Longfellow by a quotation—as was the rule when names were called, whilst the local "express agent" shone in amateur theatricals. Thus does the inevitable tendency of the Anglo-Saxon race towards betterment show forth, and the equally strong belief in equality of the American assert itself. There is no reason why a blacksmith or trainman or any one else of manual employment should not assert himself in higher things; and it is a fortunate condition of the Anglo-Saxon world—California or British Columbia—on the Great Pacific Coast, that it is a new world where the actual doing of things with hands as well as brains is not despised, or is not yet despised.

One of the most marked features of American life, and California does not escape it, is the wrong-doing constantly exposed in the newspapers, of business corporations and "trusts." Embezzlement by officers of companies, oppressive measures of combines, and upper-class extravagance such as in Britain are never witnessed—social sins such as the noble fathers of their country, from Washington downwards, would have wept to see. I will quote from the newspapers of this current year, so that these may not seem to be generalities

aroused by any sense of unkind criticism. Here is a paragraph dealing with the affairs of a New York "Ice King"—

"It was an extraordinary account which the 'Ice King' gave of how his millions melted in the panic like summer snow. When questioned by the official receiver of New York regarding his vast holdings in scores of wealthy corporations, of which he was the controlling spirit two years ago, all the convict could reply was that his shares were pledged with his creditors. Just prior to the financial panic of 1907 he had boasted he was worth four and a half million pounds. To-day he is penniless and in debt, in the Tombs Prison; the man whose downfall caused the greatest financial upheaval of recent times."

The "Ice King" thus laid by the heels, along comes the "Copper King" as follows—

"The American 'Copper King,' who was involved in the financial panic of 1907, was arraigned¹ at New York on a new indictment charging him with the misappropriation of £450,000 belonging to the Mercantile National Bank, of which he was President."

The "Petroleum King" escaped any very pressing engagements with his country's magistrates, but some very unkind things were said about him and his particular kingdom as follows—

"The Standard Oil is reaching out with the broad and greasy hand of boodle to control the newspapers, the law-making bodies of the states and the nation, and the judiciary and executive authorities. It is a mighty engine for governmental corruption to the end of placing the people under still greater tribute. Is it possible that such work can escape the day of reckoning at the hands of an outraged and plundered nation?" Such are the words of one of the leading newspapers of New England of recent date.

California possesses numerous fine public institutions, and education may be considered on a good footing. The splendid Universities of California, at Berkeley and that of Leland Stanford at Palo Alto are famous centres of learning, whose schools are open to persons of both sexes.

¹ April, 1909.

These institutions enjoy endowments of many millions of dollars. Also, the people of California have seen the advantages of education, and do not complain of taxation to secure it; and the best buildings in the country towns are the schools. There are four normal schools; high schools are found in the towns and cities and in some of the villages, providing secondary education; while ample state provision is made for the rural schools throughout the country. There are numerous well-known scientific, philanthropic and charitable institutions in the state. The great mineral industry has its museum in the California State Mining Bureau; and technical and geographical societies further the work of scientific research in other fields. Enormous hotels and blocks of offices are a feature of San Francisco and other cities; and beautiful private houses are innumerable, whether in town or country. The prisons and penitentiaries of the American state are generally of a highly organized character, and indeed the criminal is well looked after—perhaps too well for his discouragement! The lax administration of criminal law is one of California's defects, as indeed it is throughout the United States generally. As to religion there are numerous denominations at work—principally Protestant, of course. It is stated that Californian churches are as well attended as those of the older states. It may be said the whole machinery of political and social life is complete, and with the lapse of time it may be expected to produce citizens of the highest type.

The great bay of San Francisco is the dominating hydrographical feature of California. This vast tidal reservoir, with its narrow outlet to the Pacific Ocean, has an area of seventy-nine square miles of water of a three-fathom depth limit, and is entirely land-locked save for the Golden Gate outlet. Its geographico-commercial position is of extreme importance, lying as it does upon what may be described as the great trade route or "axial line" of the world's commerce, a condition shared by its sister port of Vancouver in British Columbia, to the north. Upon the waters of this Californian Mediterranean the flags of all the merchant ships of the world are reflected: dominant among them the red ensign of Britain. Towards this splendid concealed harbour all the rich grow-

ing traffic of the elliptical-shaped Californian Central Valley gravitates; and from the awakening western East—the Orient of “yellow peril” and growing commerce—come navies as towards a natural portal. During my sojourn in San Francisco it was a regular distraction of mine to walk along its numerous quays. Here were great steel, four-masted, modern sailing vessels, beautiful types of ships, from Newcastle with coals, or other British ports with varied merchandise, which had winged their way adown the great Southern Atlantic, doubled the stormy Cape Horn, lingered in Chilean and Peruvian ports, or beaten far out into the great South Pacific Sea to gain their motive-power—the wind, but with their prows and their masters’ hopes both towards the Golden Gate—fifteen thousand miles of a wind-blown voyage from Britain, with their skippers boasting of the swift passage out from home. Here were short, stout-looking Scandinavian barks, with Danish or Swedish ensigns at their peaks, and Italian ships with elegant figureheads, and steamers with funnels marked with various devices representing the great “tramp” army of ocean-buffeters of all the maritime nations of the world. And here lay the *Tropic Bird*, a famous little schooner from Tahiti, and other craft from other far-off Pacific isles of the West. Along the quays the scent of coffee, from the woven grass packages lying there, filled the air, and at the gangways of every departing steamer for the Orient sleek-looking Chinamen jingled great strings of American and Mexican dollars, eager for usurious exchange with their outgoing countrymen. The great mail steamers to Panama, to Australia, to Hong-Kong, lay like leviathans afloat; and beyond them the low, frowning iron walls and turrets of California’s coast-defence vessels, built in the harbour works.

San Francisco, built on the promontory which forms the southern side of the Golden Gate, rises upwards upon its street-crossed hills. High and handsome it arose (and high and handsome it is arising again), but in April 1906 a wave of earth-unrest, a spasm of Mother Nature’s bowels, such as she suffers from at intervals throughout the ages, passed under San Francisco, and its proud towers toppled, its buildings fell, and its streets were crumpled up—

“My dream is of a city of the West
Built with fair colours ; still and sad as flowers
That wear the blazon of the autumn hours :
Set by the side of some wild wave's unrest.”

For in a short terrible period that splendid work of man, its houses, office buildings, great Palace Hotel (boasted the largest in the world), its fine new sky-scrapers (one of which I had a hand in building), its churches (what few there were), its drinking and gambling dens, its underground dens of vice—“the dives” (exceedingly numerous), its Chinese lottery and Chinese quarter, with forty thousand Celestials, its streets of legalized prostitutes—in a word, all its varied and extensive community was levelled with the dust or burnt with fire. They say the top storeys of the high office sky-scrapers (in some of which I have spent many days) swung like hammocks! Imagine yourself, kind reader, pursuing your peaceful avocation in your office two or three hundred feet from the ground when, before you know what is happening, you and your office are describing an arc against the sky! I can imagine it, for I was once thrown out of bed by an earthquake shock in a San Francisco hotel, and I seemed, as I looked out of the window, to see an unstable world before my eyes.

The San Francisco earthquake and its cause and effects were scientifically inquired into by a commission appointed for the purpose, and a study was made of the “earthquake crack,” which covered a range of territory three hundred miles in length. It was, of course, known that the earthquake was of a tectonic nature (the releasing of strain in strata ; or its settlement), and not of a volcanic nature. What took place was a lateral shift of the strata and the ground, and the soil and rocks in many places were found sheared and fissured, as indeed were streets and railways. The position of San Francisco invited such a catastrophe—not the first, nor is it likely to be the last—for a series of parallel faults or lines of rock-dislocation run through the coast range of California near the shore; three faults in the cretaceous sandstones. Yet it is stated that only ten per cent. of the damage to the city was due to the earthquake, the rest being due to fire consequent upon the water mains having been sheared by the fault. The steel buildings showed

marked stability under the shock. Nevertheless, it was the earthquake that caused the most serious part of the catastrophe—the loss of life.

The Great Pacific Coast is a vast, long, menacing zone for the people who inhabit it: menacing from its frequency to earthquake shocks. The terrible earthquake of San Francisco in 1906 was almost equalled by the similar catastrophe in Valparaiso, 8000 miles to the south, at the same period; and in earlier years, by the destruction caused in Mexico, Lima Callao, Arequipa and other cities of the Great Pacific littoral. So long as man will persist in building himself structures of brick and stone, exaggerated in size beyond his real requirements, in this or any other danger zone, so long will he suffer. The people of San Francisco, full of energy and hope, are building up their city as fast as possible, and it is marvellously fast, but whether they are fools or wise men in so doing is open to question. The same calamity might occur again to-morrow. There is no radical departure in the type of construction employed in the beautiful new buildings which are rising up, or have already risen. Man's habitations, if they are not to go down before the forces of nature, must be of a more modest type in such regions, for the earth will not have these great structures, and, it is to be feared, will shake them off again.

Moreover, it is impossible to refrain from drawing a moral from the destruction of San Francisco. The "sky-scrapers" of this and other American cities are greedy structures in the many cells of which the human ant is hatching the eggs of his too often nefarious plans; and San Francisco has markedly the attributes of a modern Babylonian city. Whilst giving the Americans their due as a civilized and marvellously progressive people, the historian has to point to years of cynical robbery of the public funds by those officers to whose care they were entrusted; years of bribed justice in politically-controlled law courts, years of saloon-mongering and of vice and murder among the lower orders. The political and financial element are corrupt: "they have done abominable things; their right hands are full of bribes," as the psalmist says. The misery and dishonesty in American cities is worse than in the cities of Europe, whose vices they have not only

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inherited but exaggerated. No student of social evolution but will believe that this is a passing phase which must some day give place to nobler ideals. We cannot but believe that the selfish millionaire will learn that his riches are but held in trust; that the corrupt politician will grow to abhor his ways, and that an era of real civilization will be the outcome of the strenuous life of this splendid stiff-necked]

VIII

THE CONQUEST OF THE DESERT

THE desert ! What shall we say of the desert ? There are two points of view from which we may behold it, and they depend largely upon our mood of the moment, and our general frame of mind, brought about by our experience of man and knowledge of Nature. At times we do "love man the less and Nature more, from these our interviews," and from our knowledge of both : so that in the desert we may at times be glad, at others regretful to see his habitations there. For not the least of the values of the desert is its contrast-value. Who has not surveyed the wilderness and rejoiced he saw no human habitation there ! From the high rim of some rocky amphitheatre who has not looked down and marked cliff and foothill, and sandy sea stretching away into the glimmering haze, untenanted of organic life except for those primitive forms, the cactus and the coyote, and has not felt glad that no towns are climbing up the slopes, swelling upwards in insidious rows as towns in every land crawl up the slopes and float along their fertile bases ? The great high barren plateaux and the sterile wastes, harsh and cruel or soft and beautiful, according to the angle of the sun upon them, will always have their value as realms of solitude and thought. They are mighty temples far withdrawn, for those who, of the world perforce, decline to be always or wholly of it. So the desert has its beauty and uses, both of which it is the traveller's innate tendency to look for, whether he is conscious of it or not : for as true travellers we are universalists, to us everything in nature has some plan and value, which even if not easily manifest are there nevertheless.

Having permitted ourselves this digression, kind reader, let us turn from this frame of mind and consider the desert

as an asset for us—its practical and industrial uses; and so inevitably, being men, to lend ourselves to erecting those swelling rows of houses which a moment since we had condemned. For despite them we must recollect that deserts alone produce savages, whilst cities produce civilization. To the conquest of the desert we shall inevitably put our hands; and its conquest in the regions tributary to the Great Pacific Coast is a great and palpable matter for man.

The great stretches of desert adjacent to the regions tributary to the Pacific Ocean are very marked in the southern part of Western North America. Beyond the Sierra Nevada of California, between these and the Rocky Mountains and extending southwards upon the Colorado River and across Arizona and Mexico, is a great wilderness. The states of Nevada, Utah, New Mexico also form part of the huge territory of arid Western America, at one time known as the "Great American Desert." The things which Nature has done here and which man is doing in the conquest of this singular region are almost unique. The works of reclamation being performed in these deserts prove the people of Western America worthy beings of intelligence and adaptability. Yet, strange to say, some of these things were done before, how long ago and by whom no one knows. For the mysterious peoples who cultivated the plains of Arizona and irrigated them with the great canals which they dug and banked, and who built towns and great houses which excite the interest and admiration of the Americanist and archæologist of to-day—seeking always for the origin of man in the New World—did but do in those unknown ages what the settlers of the twentieth century are doing again.

A great part of this huge region—double the area of Great Britain and Ireland—is drained by the Colorado River, known among other matters for its famous "Grand Cañon" in Arizona. This river, rising in the mountains of the state of Wyoming on the Green River—runs for eight hundred miles to its confluence with the Grand River, which flows from the Rocky Mountains of Colorado and flows thence south-west through Arizona. Turning then to the south, it forms the boundary between Arizona and California; and passes into the territory of the republic of Mexico near

Yuma, emptying into the Gulf of California, whose waters are of the Pacific Ocean—1,080 miles from the confluence of the two main tributaries. The famous cañons of the Colorado have no parallel anywhere upon the earth. The Grand Cañon is a very complicated system of mountain gorges, and its scenic character is, of its peculiar kind, the most magnificent in the world. This famous cañon is two hundred miles in length, with a greatest depth of six thousand feet, whilst its width, from wall to wall, ranges from eight to ten miles.

The Colorado River resembles the Nile in some respects, and the Euphrates in others. It overflows its banks with nourishing floods in the first instance, whilst the formation of its mouth at the head of the Gulf of California is analogous to that of the delta of the Euphrates below Babylon; and just as the site of that famous city was situated at the discharge-point of its river thousands of years ago, so was the site of Yuma and the Yuma Valley of Arizona the mouth of the Colorado River in former epochs. Enormous plains and valleys in Arizona, California and Mexico have been formed by the successive deltas of this river, consisting of alluvial soil of great depth and fertility. I will describe the region more particularly a little later, but for the moment, in order to close our survey of the northern Californian region, let us speak of the desert adjacent thereto, the desert of Nevada.

On the eastern base of the Sierra Nevadas is a curious topographical region where rivers run into the earth and sink there. (There are other singular places near the Colorado River, such as valleys and lakes several hundred feet lower than sea-level, of which I will speak presently.) The Carson River descends from the Sierra Nevadas south of the point where the Southern Pacific Railway crosses, and empties into a valley which was at one time the bottom of one of those great lakes—such as the Great Salt Lake—which had no outlet. This singular valley is known as the Carson Sink, the river sinking there. With the early years of this century the region around was a useless desert; but a remarkable irrigation work, one of the most important which has been carried out in this old-new engineering science in

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Western America, has now been completed, bringing much of the land under cultivation. The Truckee River, as before described, is the overflow of Lake Tahoe, high up on the *divortia aquarum* of the sierra of California, the western verge of the Great Basin. This river also descends the sierra, flowing away to the north into the lakes of the Pyramid Indian Reservation : the whole system being a hydrographic entity, with no outlet to a sea-flowing river. But the river has been arrested in its course. The forces of engineering of the United States Government dug a great canal and turned the waters of the Truckee River into the bed of the Carson River ; built a huge dam across a natural depression of part of the Carson Sink, and formed with this barrage a monstrous reservoir, spending nine million dollars on the work. The great area of surrounding land which has been brought under the possibilities of irrigation by this wise governmental enterprise is held mainly by the Government, and allotted as homesteads to settlers ; and the soil is of that extraordinary fertility under the action of water which is only shown by these desert lands, whose long-stored-up elements of plant-nourishment have remained untouched throughout the history of the world. Towns and plantations—fruits, flowers and cattle—have sprung up in a remarkable fashion in this valley ; and thus have the snows of the Californian sierras transformed themselves into vegetation and life, into man, woman and civilization. Not a great distance away from this new centre are the world-famous silver mines of Nevada ; and a new branch railway connects the region with the main line of the Southern Pacific, which stretches away towards the Great Salt Lake.

Carson City is the capital of the state of Nevada, but it grows slowly, for Nevada is not a favourite state for the home-seeking Westerner. Yet it has given up great riches in gold and silver : hundreds of millions of dollars, as Virginia City and the Comstock may well remind us. Divided by forbidding longitudinal mountain ridges, Nevada, nevertheless, possesses many valleys of alluvial soil—many where enterprise has not yet penetrated, and which remain for future operations. Yet as regards Nevada we may again ask, "What shall we say of the desert?" We may say it

is a thing of great surprises; and the State of Nevada in 1900 found again that the struggle between man and the desert brought her fresh fame and riches. If you should ask what these are, the people of Nevada will mention three names—Tonopah, Bullfrog and Goldfields. When I passed that way those places were not known. But there are always possibilities in the desert, and when I traversed them, whether in the saddle or in the Pullman car, I always beheld them with interest. The horizon of faint grey hills, expanses of sand and sage-brush intervening, lowering sun and the shadowy coyote, always seem to hide some genii of hidden, yet some day attainable wealth! This, indeed, is but the desert romance which has lured on the prospector and the pathfinder throughout history—whether to fortune, whether to misfortune. I always felt, moreover, a kind of pity for those barren regions despised and rejected as they were by all those who hurried on to more favoured spots. There always seems something of pathetic appeal in the low hills and grey monotony of the arid desert of that part of America; and when I hear of a scanty Indian well, set there almost unknown, blossoming out in three years to a great mining camp, stacking up millions of dollars in gold and silver ore against the arrival of the hurrying railway constructors, I feel that the appeal of the desert has been vindicated.

Such a place is Tonopah. A desert surprise of dramatic interest took place there such as has sustained the romance of the western wildernesses. In the middle of the year 1900 a prospector—he was also a district attorney of Nevada, but possibly had grown weary of the desk and musty law—set out into the desert and camped one night near a feeble spring which issued from the rocks in that appalling wilderness of low, grey, barren hills and sand and sage-brush. It was a place where Nature seemed to have got to her last resource when she called it to being. The monotony of the parched scrub and sun-beat plain was relieved—if relief it were—only by the patches of volcanic ash, which lay or drifted silently, the product of ancient volcanic activities. The name Tonopah signifies in the Indian dialect—and no one but an Indian would have named it at all—“water near

the surface," and the desert spring seemed to be the only thing of value contained in that appalling place—sterile, silent, lifeless. But the prospector, after the manner of his kind, gathered some pieces of black quartz which seemed to contain promise of gold. Leaving the place he returned to the town and left his specimens for assay. The assayer thought they looked so unpromising that he threw them away! but thought better of it, and subjected them to the test. What was the result? They were found to contain gold and silver to the value of £75 per ton. Astonished at this, the prospector took two partners, returned to the spring, formed a camp—his wife fetching water and doing the cooking; took out two tons of ore, sent it to a San Francisco smelting works and received in return £200 for this small shipment. Thus was the beginning of one of the most remarkable mines of the American West; and as the news spread, eager miners rushed in from all quarters; and by the end of 1904, what had been an uninhabited wilderness became a busy mining town, having to-day a population of five thousand people, with electric-light, schools, water-supply, shops, houses and churches, whilst a local paper says that new millionaires positively jostle one another in the streets!

Let us now return to the wonderful region drained by the Great Colorado River—the deserts of Arizona, California and Mexico. As before observed, we are transported here into an American "Asia Minor" as regards the regimen of its rivers and artificial and natural irrigation: and we are again reminded of the possibilities of civilization in arid regions, and the analogy with the work of Egyptians of the Nile, the Babylonians of the Euphrates and Tigris, the Chinese by their own great streams, the Hindus of the Indus and the Ganges, the Mexicans of the Nazas, the Incas of Peru, and the old unknown peoples of Arizona. Having in view such examples it would seem that the United States Government were well justified in creating their Reclamation Service, which carried out the great works at Carson and those in Arizona. Two great irrigation enterprises are being carried on here; one upon the Colorado River at Yuma and the other upon the Salt River. The first-named of these consists of a great dam of the weir type, such as are employed on

the rivers of British India; and the resulting reservoir will irrigate great areas of the richest desert alluvial land, on both the California and Arizona sides of the river. The weir is 4,750 feet long and 250 feet wide, and the waters of the Colorado will pass over it in a broad sheet. The Salt River reservoir will be twenty-five miles long, impounding nearly one and a quarter million acre-feet of water.

These silt-laden streams, for such they are, are the cause of much fertility. The soil of these great delta-deserts is ordinarily deficient in nitrogen and organic matter, which is supplied by the overflowing waters. The rivers of this region, the Colorado and its tributaries, it is stated by experts, carry from five to twenty-eight pounds of nitrogen in the silt-alluvium resulting from the acre-foot of water—a fact which bears out theoretically the ancient truth of the fertility of river waters, as in the case of the Nile. The Colorado River, moreover, it has been calculated, carries down one and a half million tons of fertilizing mud, held in suspension, every day.

Of intense interest are these ancient delta lands ethnologically. The bed of the Salt River reservoir was at one time the scene of a busy agricultural population of the people of the cliff-dwellers, and the first white settlers who arrived in the region some forty years ago easily distinguished the boundaries of these ancient fields, which, with the lines of the old irrigating conduits, are still to be traced. The ground must have been cultivated by these prehistoric people, and formed a granary for a great population; examination having shown that the alluvial soil has been spread by artificial irrigation many centuries ago. These lands, which the constant fertilizing process of irrigation renders inexhaustible, are to be portioned out to settlers when, in a year or so, the works are completed. Thus the United States Government is admirably carrying out valuable work which private capital would not undertake. As it is, great crops of alfalfa are raised in the already settled lands; stock-breeding carried on, as well as orange-growing; whilst towns are springing up and the land rising in value.

A similar tale may be told of the desert blossoming in what is now termed the "Imperial Valley": a new name

for an extraordinary topographical region situated between the Colorado River on the east and the San Jacinto Mountain on the west, in the south-east corner of California near its boundary with Mexico. Near the northern end of the great valley lies the famous Salton Sea, the remarkable and formerly mysterious lake which in bygone epochs formed the head of the Gulf of California. The receding of this left, inland, a sea, which, evaporating, deposited a great body of almost pure salt. Its unexplained constant refilling has been explained as being due to periodical overflows of the Colorado River. Recently this habit has been prevented by extensive dykes, made at much expense, and with great engineering skill, which control the waters of the river. As for the Salton Sea itself, it is enclosed in a rim of hills which rise two hundred feet above its surface, and which ensure safety from its possible overflow for the farms of the valley. Moreover, the utilization of the surplus waters of the river above the irrigation works which supply the canals of the valley will bring about a constant regimen of the river, and it is expected that the once mysterious Salton Sea will shrink and evaporate, and at length completely vanish. The whole of this valley once formed, as stated, part of the Gulf of California; it is a great delta deposit of alluvial soil, and the channels of freshets at times cut down into this to eighty feet of depth. It is calculated that the pure alluvium, in places, is five hundred feet deep: silt from the decomposed Colorado and Arizona rocks brought down by the streams during past ages. The river, moreover, is pushing the head of the Great Gulf of California, in Mexico, southwards at the rate of nearly two and a half miles per annum, so modifying the form of the "Vermilion Sea" of Cortes. The irrigation system here contains one thousand miles of main and subsidiary canals. Oranges, dates, figs and grapes, beet-roots, melons, alfalfa are produced, and a thornless cactus has been evolved—a valuable forage plant.

But what shall we say of new villages 265 feet *below the level of the sea!* Yet such is the remarkable topographical fact, and the Southern Pacific Railway, the line from Los Angeles to Yuma which traverses this region, passes along the bed of this ancient salt lake for a long distance, 250 feet

below sea-level. This singular region is set between the Colorado River, not far away on the east, and the Pacific Ocean at no great distance away on the west. A further instance of a natural oddity is the oasis at the station of Indio, on this line. This is an oasis of a Government nursery of date palms, experimentally planted, situated below sea-level, and watered by artesian wells which have tapped a subterranean stream a quarter of a mile below the surface of the sun-beat desert sand! A little further on are other date gardens, under similar conditions, and more than two hundred artesian wells give them life from the same subterranean streams. It is believed that a new industry will be established in date-growing, eighty varieties of which fruit are being cultivated here.

Arizona is a remarkable land. A new civilized Arizona is springing up. Towns with electric light, schools and other matters are flourishing now where the desert stretched formerly, and the cowboy is giving place to the professor. But Arizona is famous for its natural world. Is it not the land of the marvellous Grand Cañon, of the Painted Desert, and, with its sister state of New Mexico, the home of the old cliff-dwellers and of the Enchanted Mesa? Nowhere in the world is the desert so wondrous and unique as in Arizona.

In the conquest of the desert by irrigation there are three stages: the making of the irrigation works—reservoirs, canals, etc.; the preparation of the land for the water; and the choice of and cultivation of the plants and crops. It is not to be expected that the ordinary farmer, possibly from humid regions where neither theory nor practice of irrigation is known, could undertake these matters; and so the Government Department instructs him in all necessary particulars. Professors and practical men are in charge; and, moreover, special travellers are sent out to all the lands of the world by this wise department of agriculture, to seek and bring in suitable plants. Thus dates from Arabia, olives and oranges from Spain, rhubarb from Central Asia, celery from Europe, asparagus from England, cloves from Egypt, Smyrna figs, alfalfa from Turkestan, date palms from the Sahara, oats from Sweden, wheat from Russia—all have been brought in.

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The irrigation agriculturists of America soon found that irrigation without drainage soon produced evils, as meddling with Nature often does. A saturation point in the soil is reached which kills vegetation, soluble salts and alkalis are deposited at the surface as the water evaporates, and last, but not least, malarias and agues are brought about as a result of the stagnant water in the subsoil. This latter fact I have observed in places so widely separated as Northern California, Central Mexico and Southern Peru, and in some cases have personally suffered from the results.

But science overcomes these things, and the Great American Desert, which was not many years ago an arid wilderness, or at best a grazing-ground for antelope and buffaloes, is being converted into fields of waving grain and luscious orchards. The buffalo and the bloody Apache have come and gone; the cowboy has come and—almost—gone, and the “man with the hoe” now occupies the field.

A word here as to Nature's cactus gardens. Have you ever seen one, kind reader?—you will never again think that the desert does not produce beautiful things: and, indeed, rare beauties of the plant world. I have, during hot and weary rides over volcanic ranges or arid, sun-beat hills, come upon some little amphitheatre of the desert where Nature for some whim or cogent reason has collected together her choice and varied specimens of the cactus world. It is a singular fact that many species get together. Their forms and colouring, both as to thorny limbs—for leaves they have not—and singular flowers are beautiful and unique. Here is a spreading compact cushion which, were it not studded with spikes, would invite one to rest, like a grassy bank; here is a tall pillar of octagonal form, with elegant rows of spikes up the edges of its eight faces; here is a unique “pin-cushion,” provided already with a myriad pins, with the points outward, but bringing forth fruit, and by its fruit ye shall judge it, for it is, in flavour, like a juicy lemon and most refreshing on a desert ride. Here, indeed, we shall gather grapes of thorns and figs of terrible spike-bearing desert orchards, for the delicious *tuna*, or prickly-pear or wild-fig, is one of the chief inhabitants of the desert gardens, and greatly appreciated both in its wild and cultivated states.

As I have reflected elsewhere, the railway in Western America is a more familiar and living part of life than in Europe. In the country it is unfenced and open, and runs down the middle of the streets of towns in many cases, and no Act of Parliament demands level-crossing gates, or bridges under streets. Incidentally this useful and familiar friend devours a good many more people annually than do the railways of Britain, and it has been calculated that the victims of railway disasters in the United States, in a single year, exceed the total loss of life in the famous Boer War! But only those who have sojourned in the West can understand how living a link the railway is with the outside world.

Have you ever dwelt in a little frontier town, kind reader, on the great prairie, where the sun rises and sets upon the petty incidents of life of a cut-off community of the West? If so you will not have resisted it—resisted going to the station at the hour when the single daily train is timed to roll in. There is no platform or station enclosure probably: only the single line of rails and sleepers, a siding, a few shanties, and beyond and around it the broad stretch of desert extending away to the curvature of the earth, with nothing to break the eye except the dust-spirals whirling upwards from earth to sky, eddying away to nothing. But hark, what is that? a faint roar, a faint patch of vapour on the horizon, which some among the inhabitants—for all are collected there—say they see and hear; some say they do not, according to their sight or imagination. It is the train; it has emerged from the nothingness of the horizon, and, a living entity, is approaching from the outside world. “Here she comes,” says the Anglo-American loafer—if we are in Anglo-America (for this scene may be anywhere in the West). “Aqui viene la maquina,” the Spanish-American equally says, and it means the same thing; and presently the train rolls up, the passengers gaze from the windows of the Pullman car, all is bustle for an instant; a sack of mail—ha! letters from home, and newspapers from the world—is thrown out. “All aboard!” or “Vamanos!” (according to the land or language as aforesaid) is shouted by the conductor of this desert convoy, and before we can turn to leave the place the ponderous vehicle is but a speck upon its shining lines

far away, and only the faint "click-clack" of the resetting rails under the hammer of the locomotive wheel is heard, which itself presently dies away.

I must confess that the railways of Western America have afforded me subjects of interest, both as an engineer and an observer. I have made journeys on foot over long stretches of some of these railways, traversing great viaducts where no balustrade intervenes between the rails and the ravine below. Some of these high viaducts—as in California or elsewhere, are of great length, spanning valleys and deep ravines thousands of feet wide, and they consist of nothing but the high trestle or bridge girders, with no space for passing by any incautious foot-passenger who might be caught by a train there.

On one occasion I was caught thus. It was a long trestle on a curve, terminating at the end across the valley in a rock cutting, and I entered upon it hoping to hear the sound of a train—should there be one coming—before I had got too far to return, or near enough to the other end to reach it before the locomotive might enter upon the viaduct. But exactly what I feared might happen did befall. I had just reached the middle of the viaduct—it was about a thousand feet long—when I heard an ominous sound near. It must be a train! I laid my ear to the rails, and there was no possibility of mistaking the vibration. To go, or to return, that was the question; for beneath me roared a river a hundred feet below. I did not waste time in cogitating, but began to start to run back. Now running is not easy upon railway "ties" or sleepers, for they are spaced at a distance too short for your stride, and it is easy to catch the foot in the open space between, and trip up, unless going slowly. I had scarcely run a hundred feet when the locomotive emerged with a roar from the cutting and entered upon the viaduct; and I turned knowing that it must overtake me long before I could reach the end. I confess my heart stood in my mouth. The train was a heavy mineral train coming on with frightful velocity, and the driver, even if he had seen me, which possibly he did not, and even if he were willing to stop (which very possibly he was not, for your Western American engine-driver does not hold human life in the same value as

his British *confrère*) could not have pulled up in the distance. Was I to die thus; to be hurled into the forest below by the cow-catcher of a locomotive on a rickety viaduct? I thought not; and like an inspiration came the idea to let myself over the side of the structure and hang on by my hands. To think was to act; I slid over; the engine reached and passed me, a few feet from my head; the viaduct shook under the heavy train, nearly shaking me off; and then the train passed after what seemed an age. And I pulled myself up and lay down to breathe freely between the rails. Whenever I hear the roar of a locomotive I think of that great viaduct, river, pine forests and the hurtling train.

In the conquest of the desert, good reader, we shall not be free from perils. Yet an immortal chronicler of the desert has said—and the heart of the pioneer shall repeat it—that the traveller shall not dash his foot against a stone, and that no plague shall come nigh his dwelling, nor the lion and the adder be a cause of danger to him.

IX

OREGON AND WASHINGTON : THE LANDS OF THE COLUMBIA RIVER

THERE are certain regions which, by some set of circumstance, seem to remain little known by the outside world. Who except those immediately connected therewith remember where the states of Oregon and Washington are; or what is the occupation of their people? Yet here is a country on the Pacific Coast, with a shore-line five hundred miles in length and embodying vast areas of valuable land bordering upon the tributaries of the largest and most important river throughout the whole of the Americas, North, Central or South, which empties its waters into the Pacific—the Columbia River. Fifty-five years ago a remark was made about this region by the member of the American Congress which, if not complimentary, is historic. He said—and it is the same sort of thing which British statesmen have said about our own colonies in earlier periods, so we will not be pharisaical—that he “would not give a pinch of snuff for the whole territory.”

Yet Oregon, in its early history, was a region of much greater political and commercial value either than California or British Columbia. Moreover, the Oregon question severely taxed the resources of diplomacy of British and North American statesmen, and was at that period almost a cause of war, as has been set forth in the chapter of this work devoted to the historical development of the coast. Oregon extends from California northwardly to the Columbia River; Washington from that great fluvial highway stretches northward to Puget Sound and the 49th parallel, which forms its frontier with British Columbia, both states extending from the coast back to their boundary with Idaho.

The main line railway which runs northwardly through the

Great Central Valley of California—which valley I have fully described in the chapter upon the Golden Gate—follows the course of the Sacramento River to the head of that valley and its great terminating landmark, Mount Shasta, amid whose snows the Sacramento is born. Crossing the Siskiyou range the railway enters the state of Oregon and traverses it between the Cascade range and the Coast range to where it reaches the great Columbia River and the important city of Portland.

Portland is looked upon, or, in a certain American aphorism, is expressed as, a species of Western Ultima Thule. "From Portland, Maine, to Portland, Oregon," the American says when he wishes to embrace his whole continent from east to west, for on the rock-bound coast of Maine there is also a town called Portland, much older, however, than its sister of the Pacific slope.

Oregon differs from California greatly as regards its climate, for it is a region of much heavier rainfall. Whilst California has but one navigable river, Oregon has four, notwithstanding that the first-named state has a coast-line seven hundred miles long and Oregon 350 miles. These rivers are the Columbia, the Willamette, the Umpqua and the Rogue River. All of these rivers empty into the Pacific, and all of them run westwardly and transversely from the mountains to the sea, except the Willamette, which is a longitudinally flowing artery, and an affluent of the Columbia, and coming from the south it empties into the latter great stream near Portland, some distance from the coast.

The climate, even in the north of Oregon, is remarkably mild, as evidenced by the fact that the mouth of the Willamette River—whose latitude is two hundred miles north of that of Boston on the Atlantic—is rarely covered in winter with more than a mere film of ice; whilst in some places the snow does not last three days in succession. This is the effect of the Japan current. Oregon possesses some fine lakes, as the Upper and Lower Klamath, and numerous other large bodies of water halfway across the territory towards the borders of the neighbouring state of Idaho. But perhaps the most unique of mountain lakes of these regions, next to Tahoe in California, is the remarkable Crater Lake, in the heart of

the Cascade Mountains. This is one of those singular bodies of fresh water found at high elevation in the American cordilleras, of which Tahoe in California is an example (and, although of a different character, the high upland lakes of Mexico and Perú). Crater Lake is at an elevation above sea-level of 6,260 feet, and, as its name implies, it is of volcanic origin—the waters filling up a crater-orifice. It is, indeed, part of that volcanic region of which the Sierra Nevadas of California are a continuation; and Lake Tahoe is of similar character. Mysterious and inaccessible lies this beautiful mirror-lake: a clear crater-cupful twenty miles in circumference with a precipitous rim from 1,500 to 3,000 feet above the surface of the water. So enclosed is it by these forest-fringed walls, which are reflected in the clear transparent element below them, that no mountain breeze ever enters to ruffle the surface. Access can be gained to its uninhabited shore—for neither bird, beast nor fish exist there—by one single narrow way, and then only in summer; for in the winter season the way through the surrounding forests of the region is blocked with deep snow. The island which arises in the lake is about three miles long, a volcanic cone nearly nine hundred feet high, with a crater five hundred feet in diameter. This strange mountain lake has neither inlet nor outlet for its waters, except it be a subterranean one, as possibly evidenced by the caves upon its verge; and no bottom has been reached at two thousand feet.

Common heritage of Oregon, Washington and British Columbia is the great Columbia River, so named by the American, Gray, who discovered its mouth, from the first ship which entered it. Referring to the name Columbia, it is a singular fact that no state of the American republic has adopted the classic nomenclature for its own. That splendid outpost of the British Empire on this Pacific Ocean—British Columbia—has taken it for its own, whilst, far to the south in the Spanish-American world beyond the Isthmus of Panama, the republic of that name is also so christened. The state of Washington, sandwiched in between British Columbia on the north and the Columbia River on the south, made, at the time of its separation from Oregon, a feeble effort to adopt the name of "Columbia," which might

have been appropriate, and would at least have saved the American post-offices—to say nothing of the foreigner—the confusion sometimes arising from having two districts of Washington—one on the Atlantic, another on the Pacific. But the opportunity was lost, as it was vetoed by Congress; and even when the territory, later on, was admitted as a state, no change was made.

The Columbia River, with its magnificent background of eternal snow-clad mountains of mighty form, and its vast length of three thousand miles, claiming for itself the grandest river scenery in the world, is veritably the father of this vast region of the north-west which it drains, and the premier stream of all those fluvial ways which empty on the Great Pacific Coast, from Alaska to Patagonia. Enthusiastic travellers have, indeed, acclaimed its superiority to the St. Lawrence and the Hudson, or to the Danube, the Rhine or the Elbe; whilst South America has no stream of this character at all.

The city of Portland is upon the Willamette River, a few miles above its confluence with the Columbia, about a hundred miles from the coast at Astoria. It is a well-situated place of much importance, with a large, busy population. Notwithstanding its distance from the estuary, Portland is practically a seaport, the river being sufficiently deep to permit the passage of ocean steamships, and nearly a mile wide. The group of great snow-clad peaks of the Cascade range, five volcano peaks which are beheld from the city, are a marked feature of the topographical environment of Oregon's gateway. Mount Hood is 11,200 feet high, and Mount St. Helens 9,750; and from the streets of Portland they stand up startlingly and clearly in their gleaming snowy beauty. The internal heat of St. Helens' volcanic fires wars against the perpetual snow-cap, and there is a space near its summit which is bare of snow. The peak has the conical form characteristic of this class of volcanoes, such as Popocatepetl in Mexico, Chimborazo in Ecuador, Coropuna and the Misti in Peru, and others in these lands which front upon the Great Pacific littoral. These are in contrast to the class of volcanoes which have a serrated crest, such as Mount Hood in Oregon, Shasta in California, Ixtaccihuatl in Mexico, Sara-Sara in

Peru, etc., which occur at the moment to my mind. The Indian name for Mount St. Helens is Lou-wala-clough, meaning "The Smoking Mountain," from its volcanic character, some activity, it is stated, having been evident in 1853. It is interesting to compare its name with that of the Mexican Popocatepetl, which also means "The Smoking Mountain" in Indian nomenclature.

An attractive and notable feature of these snowy mountains of the Oregon region, from Shasta in California to Mount Tacoma in Washington, is their relative isolation from each other or from other groups, a characteristic which affords an added grandeur and individuality. Where numerous snowy peaks are jumbled together in close proximity to each other they lose in individuality; but where they start gleaming from the dark forest-seas which clothe their bases and the low hills around them, their beauty is accentuated. Moreover, the sky of the American cordilleras backs them with an intense blue, from British Columbia to Peru. The forest contrast in Peru and Chile is not, of course, obtained, as the Andes are treeless; nevertheless, the solitary snow-capped queens of the Andes gleam from above their purple foothills and burnt-sienna-coloured deserts with similar individuality. Also, the great height of the snowy peaks of the Ecuadorian and Peruvian cordilleras, or rather their altitude above sea-level, renders them more remarkable than their sisters of North America. In Peru I have lived in large towns where the people pursue their daily occupation at an elevation greater than that of the summit of any of the Californian or Oregonian snow-queens, or, indeed, higher than the summit of Mont Blanc! Moreover, the sky of the American cordilleras lends an added beauty in being cloudless, all down the Pacific coast.

Snow-clad mountains are ever a subject of fascination for the traveller. It is not that they are merely things which excite one's curiosity—although the craving simply to scramble up to their glorious crests and say we have been there is common with us all—but to some their beauty as Nature's processes is equally alluring. Behold the mighty hydraulic engines of the Cordilleras! Have you seen "the treasures of the snow"? how they are mightily piled up on

the roof of the world; deposited upon those great storehouses from moisture-laden winds which have swept over thousands of miles of sea or plain to perform their valuable function of doing what?—the question is answered by the agriculturist or peasant, who, hoe in hand, is irrigating some patch of thirsty land a hundred miles below from a stream—perchance he knows not whence it came. And here are the slow-moving glacier-engines—the lower edge of the perpetual ice-cap—that line where Nature's forces are so strikingly at work, where the adventurous traveller is permitted to gaze into one of the joints of her harness.

Mount Rainier or Tacoma, the pride of Washington's mountains, is 14,444 feet in altitude, and it gains in individuality in rising from sea-level almost, displaying its great snowfields and glaciers even from the sea. Mount Rainier, as well as Mount Hood, were named by Vancouver, who first sighted them in 1792, after British peers, whilst Mount St. Helens had a somewhat similar origin. These names have been objected to by some patriotic American writers and tourists in view of their being on what now is American soil. Indeed, the naming of mountains after individuals, such as has been common in the Pacific North-west, has been a common defect. In Spanish America the original Indian names—and they are generally of poetic meaning—have not been supplanted; but the Anglo-American has often suffered from a poverty of nomenclature in his hills and settlements. In the United States repetitions of old-world names abound; and it is almost startling to the traveller, as he comes suddenly upon the ugly wayside station of some mushroom village, flung out upon the prairie or upon some barren foothills, to read the name of "Paris" or "London"! Even such practical appellations as "Shirt-tail Cañon," or "Kicking-horse Gulch," such as it has been my fortune to observe, have at least the merit of originality, although I confess I never felt much attracted towards the name of "Tombstone," the enterprising town of Arizona! Recently, however, the citizens of that place have taken steps to change the name.

Mount Rainier or Tacoma (the latter is an Indian designation meaning "mountain") is visible from great distances, as at Portland in Oregon, 120 miles to the south, and east-

wardly for 150 miles, but appears splendidly at a near range of forty miles from the veranda of the hotel at Tacoma; whilst from Puget Sound it is beheld from the steamer's deck, and from the windows of the Pullman car upon the Northern Pacific Railroad. At times it presents that singular view known to the Cordilleran traveller, when a snowy cone seems to be floating ethereally upon a sea of mist which shrouds the forests and hills of its base.

The settled and cultivated part, so far, of the state of Oregon is the region contained between the Cascade Mountains and the Coast Ranges, fronting upon the Pacific; especially the great fertile valley of the Willamette. Beyond this, to the east, huge areas on the map are marked, "Sage Plains," and they are semi-arid and little known, partaking of the nature of the land we have traversed, in the state of Nevada, to the east of California. Here man's fight with nature has but begun; but what even the desert may hold for his conquest it would be rash too lightly to consider. The character of the great American desert extends as far north as this region, for on the sandy plains of Eastern Washington the cactus flowers as in the deserts of Arizona and Southern California. Here it was that the pioneers on the Oregon trail took their way through the wilderness.

The Indians of this part of America are largely employed in the hop-fields, when they are employed at all. In some regions upon the coast, notably in Puget Sound, the desultory and degenerate red man has retained his primitive character, almost within sight of the new cities of the white man. Here Indian lodges may be seen—the women busy cooking or mending, or hewing wood or drawing water, whilst the noble warrior lies dreaming on his back!

Puget Sound is one of the few important indentations of the Pacific coast; for these, when they occur, form the centres of civilized life and commerce which ever cluster about harbours. Cities crowd upon foreshores, or climb hill-sides; vessels go forth to distant lands, bearing thence and bringing thither matters of traffic and supply; railways take their departure from wharf-sides to cross great mountain ranges and broad plains, and the hum of human activity resounds as a natural result of the topographical accident.

From Tacoma on this American Mediterranean of Puget Sound, steamers sail for Asiatic ports to take their share of the great spoil of trade with the "yellow peril" of Asia. Coasting steamers ply to San Francisco, also, a thousand miles to the south. The port of Tacoma is some three hundred miles nearer to Canton and other Chinese ports than San Francisco, for we must recollect that the Pacific coast is here sweeping westwardly towards Asia. Vessels laden with the inexhaustible timber of Puget Sound forests sail to every part of the world—the famous "Oregon Pine" of the timber-merchant. From this point also the Northern Pacific Railroad takes its way through the state of Washington—which it practically created—eastwardly across the continent: one of those stupendous trans-continental trunk-lines which are veritable masterpieces of the science of railway building. The Canadian Pacific and the Great Northern also have their termini upon these waters.

Puget Sound is that break in the North American Pacific Coast, entered by the common British and American highway of the Straits of Juan de Fuca—so named after the Italian explorer—at the south of Vancouver Island and British Columbia. It is indeed the first of the system of fjords which with the islands are so striking a feature of the topography of this part of the coast, after the general unbroken character of the Pacific coast-line, both north and south of Panama. Seattle, Tacoma and Olympia—important cities all of the American side—lie upon the shores of Puget Sound; and on the Canadian side are Victoria, Vancouver and New Westminster. The city of Vancouver is the terminus of the great Canadian Pacific Railway.

The Puget Sound region is a port and centre such as the future must develop into great importance upon the Pacific Coast of Anglo- and Anglo-American possessions. This splendid water-way and its harbours are slightly to the south of the latitude of London and Plymouth. For, let us recollect, the British Isles occupy and spread over the same latitude as British Columbia; whilst Scotland, and Southern Alaska cover the same parallels. The good people of the "land of cakes and thistles" do not often recollect, perhaps, that they are in the latitude of Alaska!

SEATTLE, THE GREAT CITY ON PUGENT SOUND, STATE OF WASHINGTON VIEW FROM THE WATER-FRONT

This great Anglo-American inland sea of Puget Sound extended southwards in a former geological epoch to the Willamette Valley in Oregon—150 miles away, the land distance from Portland to Tacoma. The enormous forest regions upon the littoral of the Sound are of great commercial value, but unfortunately they are devastated by forest fires, which perennially ravage them; fires whose smoke obscures the snowy peaks of the Olympian Range, darkens the sun at noon-day, and sweeps far out upon the track of ocean steamers. It is less the inroads of the axe of the lumberman that has diminished this great timber region of the coast, than the fires—caused often by the selfish carelessness of whites or ignorance of Indians in these great northern woods.

There are important coal-fields near Tacoma, whether of bitumen or anthracite coal. Gold-mining is of considerable importance in Oregon, and has been so since early days. Portland is an important flour-exporting city, nearly a million barrels of flour from Oregon's 140 flour-mills being dispatched to the Orient annually. Fruit-culture, dairying, stock-raising, lumbering and general farming are all industries of this great temperate, fertile region. Oregon has a population of only half a million people; but it is calculated, with a density similar, for example, to that of the eastern state of Ohio, it could support eight million souls. The fine Willamette Valley, the "garden spot of the world," as the Oregonians term it, is 150 miles long and 60 miles wide, with an area of five million acres, threaded by the river, which is navigable for one hundred miles above Portland. All the products of the temperate zone are grown here, and give life to many prosperous towns. The Umpqua Valley and the Rogue River Valley are of lesser extent but of similar fertile character.

Thus in Oregon and Washington exist a fine temperate region and a prosperous and developing people: whose great industrial centres of Seattle and others must become to the coast its Boston or New York: great centres whose prophet was the famous Seward.

X

BRITISH COLUMBIA : THE PACIFIC GATE OF EMPIRE

WAS it some dispensation of Providence which gave to Britain as colonies, not the lands of ancient empires, where gold and silver were to be had by flourish of conquistadorial sword and trumpet, not the giddy wealth-allurement of Mexico and Peru, nor yet the effeminate spices of the East, but the lands of wheat fields, pine forests, fisheries, iron, copper and coal. The wealth which fell to British Empire luck was less palpable perchance at first, less feverish than that of the more southern conquest-lands whose El Dorados were there for the taking, but it was wealth enduring, prodigal gifts which should be won not by the sword, but by the wheels of commerce. Foremost among these characteristic empire-lands of our hardy race is that splendid sea-fronting *imperium in imperio* of British Columbia, lying like a young giant facing the sunsets upon the Great Pacific Coast. Who would change the forest-covered mountains and the fertile valleys of British Columbia for the treeless Andes of Peru or the rank Amazonian jungles which they hide from the Pacific? With all their stores of Inca gold and Spanish silver I, for one, would not be a party to such an exchange : and I have trodden Canada and traversed Peru, and so may speak of them. I mean no disparagement to the old land of the Inca; the modern Spanish-American Republic which is beginning to awake to progress now. I simply speak in terms of geographical fact. Spanish America is a great land of opportunity; but the wide temperate belt of British North America, inhabited and to be inhabited by a great temperate people, must surely be a leader of twentieth-century development.

The climate and character of the capital of British Columbia—the city of Victoria—is singularly British in

BRITISH COLUMBIA: A BRITISH CRUISER IN THE HARBOUR OF PRINCE RUPERT.

character; just as Montreal, the Atlantic terminus and gateway of Canada is. Moreover, the work performed by the Gulf Stream for the British Isles is, in a measure, performed for the island of Vancouver and the British Columbian coast by the Japan current. The Asia-facing British of Victoria are not less English than their kinsmen of old Albion; perhaps, indeed, they are still more vigorous.

The topographical formation of British Columbia obeys the general Andine structure of the Great Pacific Coast littoral elsewhere. Looking at the map we observe how paralleling mountain ranges persistently cross the meridians of longitude to the north-north-west, with interposing valleys and with rivers which, having drained them, break through the coast range and empty into the Pacific Ocean. Mightiest of the great cordilleras of North America are the Rocky Mountains which, forming the eastern side of the great basin of the United States, as shown in the chapter upon California, continue northwards and form the eastern boundary of British Columbia. The coast range, the famous Cascade Mountains fronting upon the Pacific, have also passed through Oregon and Washington from the Sierra Nevadas of California. Beyond the Rocky Mountains to the east is another great Canadian province, that of Alberta. The Rockies may be described as the father of western Canada, just as the Andes are the father of Peru.

The northern boundary of British Columbia is the Yukon and the North-West territories; to the east are Alberta and Athabasca; to the south the United States holds sway, the states of Washington and Montana, whilst all the westward part, except that strip filched, to join south-east Alaska, by the United States (I mean filched in geographical appearance on the map), faces the Great Pacific Coast. The distance along this coast-line is some six hundred miles, whilst the whole county is seven hundred miles longer. The distance back from the sea to the Rocky Mountains in the widest part is some 450 miles, and the area of the state is given as between 372,630 and 395,610 square miles. It is, therefore, several times the size of Great Britain.

This portion of the Great Coast possesses a notable hydrographical feature in that all the great rivers of North America

on the Pacific littoral, with the single exception of the Colorado (and one or two lesser rivers which empty into the Pacific in Mexican territory), have their sources therein. These rivers are: the Columbia, which flows through the Province for more than six hundred miles, when it enters the states of Washington and Oregon; the Fraser, 750 miles long, emptying into the Pacific *viâ* the Straits of Juan de Fuca at the south of Vancouver Island—the Fraser by whose great cañon the Canadian Pacific Railway is enabled to ascend the cordilleras of the Coast Range; the Skeena, three hundred miles long; the Thompson, the Kootenay, the Naas, the Stikine, the Liard, and the Peace rivers. The area drained by these rivers and their affluents is equal to one-tenth of the whole of the North American continent. A land of mountains and rivers, British Columbia is also a land of numerous lakes, some of them more than three hundred square miles in area, and the lake and river system furnish valuable facilities for transportation. The innumerable lesser mountain streams are available as sources of hydro-electric energy and saw-mill power, as well as furnishing “drive-ways” for the purposes of the lumberman or timber industry—that singular method of water transportation of logs and timber known to the westerner.

Four principal mountain ranges traverse British Columbia: the Rocky Mountains, as described, and the Selkirks on the east; the Coast Range, or Cascade, and the Island Range on the Pacific side. The Rocky Mountains preserve their individual continuity; the Selkirks are more or less broken up into subsidiary ranges: the Purcell, Selkirk, Gold and Cariboo respectively; and these main mountain divisions determine the characteristic formation of the country, of long valleys and great plateaux. Thus, along the western base of the Rocky Mountains extends a valley of singular regularity and great length—seven hundred miles—from the boundary with the United States towards the north. Between these ranges of the Selkirks, and extending away towards the Pacific, from which it is separated by the Coast Range, is a vast plateau or tableland, whose average elevation is 3,500 feet above sea-level. But, unlike the great arid *mesa central* of Mexico, or the high inclement *punas* of Peru and Bolivia, this table-

IN THE CANADIAN ROCKIES: CLIMBING A GLACIER.

land is generally fertile. It is, however, by no means a flat expanse, for it has been so eroded by streams that it presents the appearance of being traversed by lesser mountain ranges breaking up its surface. These features give place throughout large areas to broad flats and plains, low hills, rolling ground and a general configuration which has given rise to splendid agricultural and grazing lands. Up to the elevation above sea-level of 2,500 feet this plateau region will be agricultural under irrigation, the rainfall being insufficient; whilst up to 3,500 feet it will be a grazing country. This great interior plateau region was, in a former geological epoch, the bed of an inland sea. Its northern boundary is a cross range of mountains which trend towards and merge into the Arctic slope; mountains which form the *divortia aquarum* for this part of the continent between the Pacific and the Arctic watersheds. Here the headwaters of the Peace River have their rise.

Of this northern half of British Columbia, separated from the great plateau region, as above described, comparatively little is known, but the recent surveys for the Grand Trunk Pacific Railway have brought forward the existence of great forests, coal-fields, and great areas of cultivable land; and there can be no doubt that it contains natural wealth and resources of vast extent almost unsuspected at present.

The climate of British Columbia is influenced largely by mountain and coast—current conditions, such as are also found in California, Peru and Chile, although to contrary effects. In British Columbia a series of alternating moist and dry zones are encountered. The moisture-laden winds from the Pacific, together with the influence of the Japan current, give rise upon the British Columbia coast-zone to a moderate, temperate climate, with a copious rainfall. These westerly winds impinge against the Coast Range in the first instance, and their interception causes a “dry belt” to exist to the east, in the plateau region described. But the higher currents of these humid Pacific winds carry moisture over to the Selkirk Mountains, upon their loftier peaks, resulting in a heavy snowfall thereon. This snowfall makes a contrast with the Rocky Mountains, their paralleling neighbours further on to the east. In the Andes of Peru the moisture-

laden winds come from the opposite direction—the east—and cause similar conditions of snowfall with a dry coast-zone.

The conditions of climate on the British Columbia littoral extend up the valleys of the great rivers which empty into the Pacific, such as the Skeena and Fraser rivers. The climate of the province as a whole embodies all the characteristics of the European temperate zone, in which the most advanced civilizations flourish; and indeed the general climatic conditions of this favoured region are stated by experts to be superior to those of Great Britain. Whatever may be the effects of climate upon race it must be conceded that the people of British Columbia are the most highly civilized of the American peoples, North or South, as we deduce from our observations of the Californians and their Spanish-American neighbours, the Mexicans, as well as the Peruvians, Chileans, etc. This, of course, is due in the first instance to the relative purity of British stock of the British Columbian. The following additional particulars of climate are of value as coming from well-studied Canadian sources.

“The climate of Vancouver Island, and the coast generally, corresponds very closely with that of England; the summers are warm with much bright sunshine, and severe frost scarcely ever occurs in winter. On the mainland similar conditions prevail till the higher levels are reached, where the winters are cooler. At Agassiz, on the Lower Fraser, the average mean temperature is in January 33° and in July 64° ; the lowest temperature on record at this point is 13° , and the highest 97° . There are no summer frosts, and the annual rainfall is sixty-seven inches, 95 per cent. of which falls during the autumn and winter.”

“To the eastward of the Coast Range, in Yale and West Kootenay the climate is quite different. The summers are warmer, the winters colder and the rainfalls are rather light—bright dry weather being the rule. The cold of winter is, however, scarcely ever severe, and the hottest days of summer are made pleasant by the fact that the air is dry and the nights are cool. Further north, in the undeveloped parts of the province, the winters are more severe.”

“The great diversity of climate and the unique atmospheric

PART OF THE GRANARY OF THE BRITISH EMPIRE : A WHEAT-FIELD SEVEN MILES LONG IN MANITOBA.

conditions existing in the mountains, valleys, and along the coast, when added to the scenic grandeur of the landscape, give to life in British Columbia an indescribable charm. There is scarcely a farm house in all the valley regions that does not look out upon great ranges of majestic mountains, more or less distant. The floral beauty of the uncultivated lands and the wonderfully variegated landscapes are sources of constant delight, and impress one with the great extent of the province and its inexhaustible resources; and this great natural wealth is so evenly and prodigally distributed that there is no room for envy or rivalry between one district and another, each is equally endowed, and its people firmly convinced that theirs is the 'bonanza' belt, unequalled by anything on top of the earth."

The resources of this splendid region of the Great Pacific Coast, the home of a British people, are so important and varied as must occupy labour and capital in the future to an important extent. These resources, in order of their importance are: minerals and mining; lumbering, or the timber industry, including pulp-supply for paper; fisheries; agriculture, including wheat-growing, dairying, fruit-farming, stock-raising, or ranching, etc.; whilst Vancouver straits and harbours and the northern harbour of Prince Rupert, form a great, growing maritime centre. The great trunk-lines which traverse—as the Canadian Pacific Railway—and will traverse it—as the Grand Trunk Pacific—render British Columbia a British highway of the utmost importance.

Let us briefly consider these resources and industries. The mining industry of British Columbia has outstripped that of all other provinces of the Dominion of Canada. The total mineral production for the province since the industry began is given as fifty-five million sterling; the annual output of recent years being upwards of five million sterling. Notwithstanding what has been said as to the conquests and the El Dorados of other regions, it must be pointed out that gold it was which first drew attention to British Columbia; and the yellow metal, whether from lode or places mining, has taken premier place, with a total value of something like twenty-five million pounds sterling. This is followed in order of importance by silver, lead, copper and coal; the last-

named being an important and increasing industry. Coal-mining has long been carried on at Vancouver Island—the well-known Nanaimo Collieries; and lately the great coal-fields of the Crow's Nest Pass have been developed. As to the mineral regions generally, these are not confined to any one zone, although the southern part of the province, having been easiest of access, has received more attention. The gold obtained from the placer mines which caused the early stampede—the Cariboo district in 1858—rose to a value of nearly a million sterling in 1863, but fell off, as inevitably happens, and as took place in California. This first operation of gold-mining is always followed by "hydraulic" and dredging operations from auriferous gravel and earth deposits, and the return from these sources in 1906 was somewhat under two million sterling. British Columbia is in the great zone of gold-bearing gravel deposits, such as I have described in the chapter on California, and such as (in a somewhat different form) I have examined in Peru and Bolivia. As regards lode mining there are some important and well-known enterprises in the province with deep and extensive workings and a considerable output, and British Columbia may be looked upon as a steady annual contributor of gold to the world's supply. The recent yearly output is about one and a quarter million sterling. A feature of this production of lode-gold is that all but ten per cent. is recovered from smelting operations of copper and other ores.

Silver is also largely an outcome of lead and copper ore-production. There are various important lead-producing mines, whilst the copper output annually reaches nearly two million sterling. As to coal, more than one and a half million tons annually are produced, as well as coke, and the numerous coal-fields of the province will furnish a source of fuel and industry for many generations. The iron-smelting industry awaits development, with many possibilities, and petroleum wells have yet to be created. The smelting works of British Columbia, if few so far, are large and well-equipped, especially those of Nelson. The laws governing the prospecting and claiming of mines offer easy conditions to the miner, and there is a vast field for his operations. So

TIMBER IN BRITISH COLUMBIA ; ONE OF THE GREAT TREES IN STANLEY PARK.



it is seen that minerals form a valuable asset of the province of British Columbia, and so of the British Empire.

The forest areas of this province are given as embodying nearly two hundred million acres; and the immense reserves of merchantable timbers are perhaps the greatest in the whole of North America. Indeed the forest areas of Canada generally, are stated to exceed that of the United States and Europe combined. This timber wealth is one of the most readily available sources of British Columbian industry. The coast is heavily timbered as far north as Alaska, and the forest belt follows the sinuosities of the shore and the valleys of the rivers debouching thereon, and fringes the flanks of the mountains. The most valuable tree, and the most widely distributed on the Great Pacific Coast of North America is the Douglas fir, growing as it does from the coast inland to the Rocky Mountains and northwards up to the 51st parallel. Whilst it does not attain the dimensions of the big trees of California, which I have described elsewhere, the Douglas fir nevertheless reaches immense proportions, having a trunk-circumference at base of 30 to 60 feet; whilst average trees are 150 feet high clear of limbs and 5 or 6 feet in diameter. These splendid forest giants are greatly prized for their strength and durability, and form a valuable commercial staple. Great compact masses of this fir are encountered on Vancouver Island and upon the mainland coast of the province, and in the interior upon the Selkirk and Gold Mountains, west of the Rockies. North of 51° the Douglas fir gives place to the red cedar, the yellow cedar, hemlock and spruce, which, with the white spruce and the cypress, are other arboreal inhabitants of British Columbia greatly in demand in the world's markets. Timber merchants, or "lumbermen," as the American term has it, are rivalling each other—whether from eastern Canada or the United States—in securing these splendid forests of standing timber—a fact upon which I shall comment later in considering the "imperial" view of these fine assets. The total "lumber cut" has more than doubled itself in the last few years, whilst the timber licences issued were ten times greater in 1908 than in 1904, showing the great demand for timber, of which prices have doubled in that period. There

are numerous saw-mills in various parts of the province, representing capital invested to about two million sterling. The allied industry of pulp production, for paper-making, has begun to forge ahead in British Columbia, and the geographical advantages of the region may be expected to augment this in the future. With enormous timber reserves on the coast, or on the lakes and rivers leading thereto, affording the cheapest means of transport to her deep-water harbours, the province might command half the world as a market either for wood pulp or for manufactured paper. Before her on the other side of the Pacific Ocean which she faces are the developing markets of the Orient—Asia, Japan, Australia; whilst far to the southward on the Great Pacific Coast are the expanding republics of Peru and Chile, which (except in the south) are without resources of timber on the Pacific Coast. For, whilst British Columbia, Oregon, California and parts of Mexico have forests down to the ocean's verge, the littoral of South America is not only treeless, for stretches of thousands of miles, but even verdureless.

The great areas of first-class building timber, the finest the world still contains (for the world's timber is rapidly going into smoke or decay), is a veritable imperial heritage, about which I beg to make, a little later, some imperial comment.

Of food supply for herself and other markets in sea and river fish the province has very valuable resources, and boasts that she even beats Nova Scotia as a fish-producing region; advancing now to the first place in the Dominion of Canada. Salmon, halibut, herrings, cod, sturgeon, trout and a variety of other fish, to the value of two million sterling, are produced in this bountiful region. British Columbia salmon are highly considered, and numerous ships and thousands of hands are employed in the fisheries. The canning industry is important, as much as one and a half million cases of salmon (of forty-eight pounds) being the output for good years in the canneries. Fishing as a sport offers many attractions: added to the scenic beauties of this part of the Pacific littoral.

As the traveller, from the comfort of his Pullman car on that wonderful railroad, the Canadian Pacific Line, traverses in the limit of a day and a half the three ranges of the

FOOD-PRODUCTS OF BRITISH COLUMBIA : UNLOADING SALMON ON THE FRASER RIVER.

Rockies, the Selkirks and the Cascades, the grandest mountain ranges of North America with their snow-capped peaks, and profound cañons through which the iron way is laid, he will gather the idea that British Columbia is only a land of mountain and flood, of glacier, gorge and beetling precipice, where Nature has not yet prepared her valleys and her plains for her human tenants and their agricultural operations. This idea will be natural but wrong. What has happened is that the constructors of the Canadian Pacific Railway pushed this stupendous highway by the shortest possible route to the Pacific Coast, crossing whatever barriers might be encountered rather than making *détours* through regions of more economical possibilities. Thus the fertile valleys and the plains in this great province are rarely seen from the railway, and the glimpses of arable land which are so encountered do not offset the impression gained of a country like a sea of mountains. Of scenic wonders along the route day after day will offer their varied and stupendous panorama—mountain scenery such as no part of the United States can show, not even saving the beautiful Sierra Nevadas of California to the south, which I have described elsewhere.

Among and beyond these volcanic-built or glacier-sculptured heights and chasms, however, are rich valleys of boundless agricultural possibilities, intersecting the country from north to south—lands for ranches and farms, and dairies and orchards such as could supply a population of millions of people of British with food products. Thus in the trail of the miner and the lumberman come the tillers of the soil, the real agents of food supply; and the value of land, formerly almost unconsidered, is rising rapidly now.

British Columbia is divided for purposes of Government and for topographical reasons into eight districts, whose names and areas are as follows—

Kootenay (East and West)	.	15 million acres
Yale . . . . .	.	15½ " "
Lillooet . . . . .	.	10 " "
Westminster . . . . .	.	5 " "
Cariboo . . . . .	.	96 " "
Cassiar . . . . .	.	100 " "
Comox (Mainland) . . . . .	.	4 " "
Vancouver Island . . . . .	.	10½ " "

The character and resources of these districts are very varied, and I will quote from the publication made by direction of the Minister of the Interior of the Dominion Government at Ottawa, descriptive thereof—

KOOTENAY DISTRICT (or, "The Kootenays") forms the southeastern portion of British Columbia, west of the summit of the Rocky Mountains, and is drained by the Columbia and Kootenay rivers. East Kootenay contains a large extent of agricultural land, much of which requires irrigation, but suited to fruit-growing and all kinds of grain and vegetables. Most of the land is well timbered, and lumbering is, next to mining, the principal industry. There are considerable areas of fertile land in West Kootenay, a good deal of which is being utilized for fruit-growing. The fame of the Kootenay mines is world-wide, the mountains being rich in gold, silver, copper and lead, and the eastern valleys are underlaid with coal and petroleum. British Columbia mining has reached its highest development in Kootenay, and, as a consequence, many prosperous cities and towns have been established. The development of the Crow's Nest coal-fields and the revival in metalliferous mining has caused a rapid increase in population, especially in East Kootenay, where it is estimated to have more than doubled since 1901.

YALE.—Lying west of the Kootenays is the splendid Yale district, rich in minerals and timber and possessing the largest area of agricultural land in Southern British Columbia. It includes the rich valleys of the Okanagan, Nicola, Similkameen, Kettle River, and North and South Thompson and the Boundary, and has been appropriately named "the Garden of British Columbia." The main line of the Canadian Pacific passes nearly through the centre of Yale, from east to west, while the Okanagan branch and lake steamers give access to the southern portions. New branch lines are projected and some are in course of construction, which will serve to open up a very large mining and agricultural area. Cattle-raising on a large scale has been one of the chief industries, but many of the ranges are now divided into small parcels which are being eagerly bought by fruit-growers and small farmers. The district is very rich in minerals and coal, but development has been delayed by lack

AN APPLE ORCHARD AT VERNON, BRITISH COLUMBIA.

of transportation facilities—a drawback which will soon be removed: The Grand Trunk Pacific Railway will traverse this region.

LILLIOOET.—In natural features Lilliooet resembles Yale. It is largely a pastoral country, well adapted to dairying, cattle-raising and fruit-growing. Placer and hydraulic mining is carried on successfully and quartz-mining is making fair progress, but railway communication is needed to ensure profitable operation.

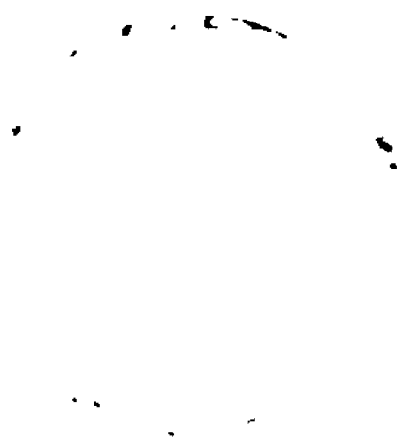
WESTMINSTER.—One of the richest agricultural districts of the province is New Westminster, which includes all the fertile valley of the Lower Fraser. The climate is mild, with much rain in winter. The timber is very heavy and underbrush thick. Westminster is the centre of the great lumbering and salmon-canning industries. Its agricultural advantages are unexcelled in the province, heavy crops of hay, grain and roots being the rule, and fruit-growing to perfection and in profusion. A great deal of the land in the Fraser Valley has been reclaimed by diking.

CARIBOO AND CASSIAR.—The great northern districts of Cariboo and Cassiar are practically unexplored and undeveloped, although in the early days parts of them were invaded by a great army of placer miners, who recovered about 50 million dollars in gold from the creeks and benches. Hydraulic mining on a large scale is being carried on by several wealthy companies at different points in the district with fair success, and individual miners and dredging companies are doing well in Atlin. Recently large deposits of gold and silver quartz were found on Portland Canal and on Windy Arm, which give promise of rich returns. Large coal measures have been located on the Telqua River and at other points, and copper ore is found in many localities. The country is lightly timbered and promises in time to become an important cattle-raising and agricultural district, as there are many fertile valleys, which are attracting settlers. In the southern part of Cariboo, along the main wagon road, are several flourishing ranches, producing good crops of grain and vegetables which, with the cattle raised, find a ready market in the mining camps. The Grand Trunk Pacific will traverse this district.

COMOX.—The northern portion of Vancouver Island and a portion of the opposite mainland is known as Comox District. It is very rich in minerals and timber, and there is considerable fertile land between Comox Bay and Campbell River, a distance of thirty-five miles—the Esquimalt and Nanaimo Railway Company is prospecting a line of railway through this fine district. The deeply indented coast-line and the adjacent islands afford fine opportunities for the fishing industry, which is now being developed on a considerable scale. Although sparsely populated as yet, perhaps no other area of British Columbia of similar size contains so much and varied natural wealth, represented in timber, minerals, fish and agricultural land, the last-named, though considerable in aggregate, being, comparatively speaking, the least important. Many of the islands contain good land, and in the vicinity of Comox there are some excellent stretches; while north from Seymour Narrows to the head of the island there are considerable areas which, if drained and cultivated, would make valuable cattle ranges and meadows. The Grand Trunk Pacific Railway will traverse this mainland to its terminus at Prince Rupert.

VANCOUVER ISLAND.—Not the least important portion of British Columbia is Vancouver Island, which, from its great wealth of natural resources and its commanding position on the Pacific Coast, is fast becoming one of the richest and most prosperous districts of the province. Coal-mining and lumbering are the chief industries, and fishing, quartz-mining, copper-smelting, ship-building, whaling, and other branches are being rapidly developed. The Esquimalt and Nanaimo Railway, running from Victoria to Wellington, serves a section of country which it would be difficult to surpass anywhere in the world for beauty of scenery and natural wealth. There are prosperous agricultural communities along the railway and in the Comox District, and several mines are being developed. There is quite a large area of agricultural land, but it is heavily timbered and costly to clear by individual effort. The Esquimalt and Nanaimo Railway Company has arranged for the clearing of large blocks of its land grant (which consists of about 1,500,000 acres) and it is expected, through the exercise of economical methods in

SEA-BATHING AT VANCOUVER, BRITISH COLUMBIA.



removing the timber, that the company will be enabled to sell the cleared land to settlers at moderate prices.

Included in the Esquimalt and Nanaimo Railway Co.'s Grant are large areas of the finest timber in the world, consisting mainly of the Douglas fir, cedar and western hemlock. This timber is in great demand and is being rapidly bought up by eastern lumbermen. The agricultural possibilities of Vancouver Island are only limited by the area of cultivable land. All the grains, grasses, roots and vegetables grow to perfection and yield heavily. Island strawberries are the choicest grown in the province, and all other small fruits are prolific and of first quality. Apples, pears, plums, prunes and cherries grow luxuriantly, while the more tender fruits, peaches, apricots, nectarines, grapes, etc., attain perfection in the southern districts when carefully cultivated.

The cities and towns of British Columbia are growing, and offer much of interest to intending settlers. The following particulars are taken from the Government pamphlet—

The principal cities in British Columbia are: Victoria, Vancouver, New Westminster, Nanaimo, Nelson, Rossland, Ladysmith, Revelstoke, Kamloops, Fernie, Kaslo, Grank Forks, Greenwood, Trail, Cranbrook, Vernon, Armstrong, Enderby.

Victoria is the capital, and is beautifully situated on the southern extremity of Vancouver Island. It is a celebrated tourist resort, noted for its superb climate, its magnificent scenery and imposing buildings. Population about 35,000. Vancouver is the commercial metropolis of the mainland. It is situated on Burrard Inlet. It is the Pacific terminus of the C.P.R. main line, and is one of the most enterprising cities on the Pacific Coast, its growth being phenomenal. Population about 70,000. New Westminster is situated on the Fraser River, and was the former capital. It is the centre of the salmon-canning industry, and is besides a depot for a fine agricultural district near at hand. Population about 10,000. Nanaimo is the great coal centre of Vancouver Island. It is about seventy-two miles from Victoria, on the east coast of the island. It has also become the centre of an extensive herring industry. Its population is about 9,000. Rossland, the mining centre of West Kootenay, has grown

in ten years from an obscure mining camp to a well-ordered, substantial city of about 5,500. Rossland's mines are famed the world over, and their development is proving their permanency. Nelson, situated on the west arm of Kootenay Lake, has a population of 7,000. It is a well-laid-out and solidly built town, the principal buildings being of brick and stone. It is the judicial centre of Kootenay and an important wholesale business point. Kaslo is an important trade centre on the west shore of Kootenay Lake. It is supplied with good stores, hotels, churches and schools, waterworks, electric light and telephones. The population is about 1,800. Ladysmith, on Oyster Harbour, east coast of Vancouver Island, is one of the youngest towns in the province. It is the shipping port for the adjacent Extension coal mines, and the transfer point for through freight between the island and the mainland. Kamloops is the distributing point for a very large agricultural, ranching and mining country, and is the chief cattle-market of British Columbia. It is also the centre of a big lumbering district. Its population is about 2,000. Revelstoke, on the main line of the Canadian Pacific Railway, is a railway divisional point and the gateway to West Kootenay. It is the centre of a good mining and lumbering district. The population is about 2,500. Fernie is a coal town on the Crow's Nest Pass Railway. There are 1,500 coke ovens at Fernie, which supply fuel to the Kootenay and Boundary smelters. The population is 3,500. Grand Forks, the chief town of the Boundary District (population 2,500) is situated at the junction of the North Fork with the main Kettle River. It is the site of the Granby smelter, the largest plant of its kind in the province. Greenwood, twenty-two miles west of Grand Forks, is the centre of a rich mining district. The population is 2,500. Trail, on the Columbia River, nine miles from Rossland, is the centre of the smelting industry in West Kootenay. The population is estimated at 2,000. Cranbrook, a divisional point of the Crow's Nest Railway, is situated in the fertile valley which lies between the Selkirk and Rocky Mountains. It is the principal lumbering point in East Kootenay. Population, 2,500. Vernon is the centre and supply depot for the Okanagan District, and is surrounded by a splendid farming, cattle and

FORESTS OF BRITISH COLUMBIA : A TOWN IN THE MAKING.



fruit country.. The population is about 1,800. Armstrong, thirty-two miles south of Sicamous Junction, is an important lumbering and flour-milling point.

It will be seen that British Columbia offers positive advantages for the intending settler, as land may be obtained and cultivated in small areas; and indeed the burden of the advice given to intending settlers in the country, by Government agencies, might be expressed in the Canadian couplet of—

“A little purse well filled,
A little farm well tilled.”

Fruit farming is especially held up as an advisable pursuit. Perhaps the successful fruit-growers of this Pacific-facing imperial garden will recollect the poor and the middle class of old England casting longing eyes for half the year at the wretched specimens of fruits in green-grocers' windows—apples at sixpence a pound and nothing else to be had. In Great Britain, fruit is still a luxury of the rich. In this connection the following extract from a speech by the Governor-General of Canada, Earl Grey, to the fruit-growers is of marked interest—

“Fruit-growing in your province has acquired the distinction of being a beautiful art as well as a most profitable industry. After a maximum wait of five years, I understand a settler may look forward with reasonable certainty to a net income of from \$100 to \$150 per acre, after all expenses of cultivation have been paid. Gentlemen, here is a state of things which appears to offer the opportunity of living under such ideal conditions as struggling humanity has only succeeded in reaching in one or two of the most favoured spots upon the earth. There are thousands of families living in England to-day, families of refinement, culture and distinction, families such as you would welcome among you with both arms, who would be only too glad to come out and occupy a log hut on five acres of a pear or apple orchard in full bearing, if they could do so at a reasonable cost.”

It is a marked condition of nature upon the lands tributary to the Great Pacific Coast that the best specimens of her animal world are found in the more rigorous regions.

Thus the Pacific slopes of Peru, or indeed of Mexico and California, are without the notable fauna encountered further to the north. British Columbia is deserving of the hackneyed expression of a "sportsman's paradise," which has been applied to it, as is indeed the whole of northern Canada. The monarch of the Canadian forests, the moose, is an inhabitant of the Dominion from the Atlantic to the Pacific and from north to south of the British Columbian boundary line. The full-grown moose weighs more than a thousand pounds; he is a noble specimen of nature's northern fauna, and has ever attracted great hunters to his habitat. British Columbia and the Yukon are famous as producing the largest specimens in the world.

As to the caribou, it is extremely wild and difficult to approach, and exceedingly swift of foot, and is dowered with a remarkable power of resistance. The barren frozen swamps of the north form its home, where it encounters the lichens which are its natural fodder; and the full-grown animal attains a height up to five and a half feet, and may weigh up to six hundred pounds. Famous for its migratory habits is the caribou, travelling in bands of twenty to one hundred; and indeed in eastern Canada enormous herds of these splendid beasts are encountered. Other famous quarry of the hunter in these northern regions is the elk, many of which are found in Vancouver Island, Kootenay, and other parts of British Columbia. The famous bighorn, also, or mountain sheep, which may be looked upon now as the sportsman's most valued prize, and whose flesh is considered delicious eating, is extremely difficult to bag. Its extraordinary power of traversing the most inaccessible and craggy places have been set forth previously in the chapter upon California; and to secure a pair of the massive, wide-spreading horns of this noble animal—a trophy much prized—a hard day's work and a straight shot are the prime conditions. Once those vigilant eyes have discerned the hunter it is impossible to approach the mountain sheep, and he can travel over his native crags in five minutes a distance it will take the hunter hours to cover, be he the best of mountaineers. The Rocky Mountain goat is another singular animal which makes its home among the stupendous peaks

FAUNA OF BRITISH COLUMBIA IN THE GOVERNMENT MUSEUM AT VICTORIA.

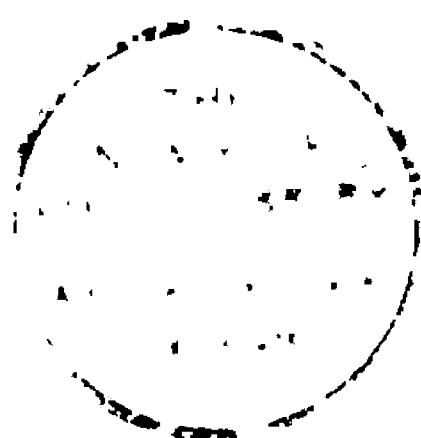
of the Canadian Rockies. He is the most daring of mountaineers, a brave and fearless fighter with his sharp horns and pointed hoofs, besting the best dog which may attack him; whilst his uncanny beard gives him a weird semi-human aspect. Even more difficult to obtain is the musk ox, whose habitat is in the far north within the Arctic circle. British Columbia and the Canadian Rocky Mountains are now the main home of the formidable grizzly bear, as this splendid animal is fast disappearing from California and the United States. Yet the grizzly, despite his terrible claws, generally runs at first from man, and like the wolf has learned that man is an enemy to be feared. The black bear is a harmless creature, and indeed is dubbed an arrant coward, and is plentiful enough all over Canada. Wolves have increased in number in Canada. The grey wolf hunts for big game in packs, doing much execution, as he also does among the ranchmen's stock. He is a large-boned, strong animal, long-headed, weighing up to eighty pounds, and every province of Canada offers a bounty for their scalps, and systematic hunting on snow-shoes has become a regular sport. Of *felidæ* the puma, or cougar, also termed the panther, abounds, and indeed seems to be increasing in the Canadian Rockies and British Columbia. Antelopes, ducks, grouse and other small game abound in this best-dowered province. And of hunting in general, of fishing, camping and canoeing British Columbia is the veritable home. A splendid booklet on the subject is issued by the Canadian Pacific Railway Company.

Victoria, the capital of British Columbia, is beautifully situated on the south-east end of the island of Vancouver, and in its surroundings and climatic conditions has no equal in the Dominion, it is generally conceded. The beginning of Victoria's history was in 1846, when, under the name of Camosun, it was a trading port of the Hudson Bay Company, and twelve years later it was borne on the wave of the gold excitement into prominence. Then its commerce and population rapidly increased: its present population being some thirty thousand. Whilst the type of architecture of Canada as a whole cannot be said to be attractive, for it is stamped with the inevitable air of utility and commercialism

of the Anglo-American Age, nevertheless Victoria is substantially built, with good business blocks of stone and brick, and a Parliament House which is considered one of the finest examples of governmental edifices in Anglo-America. The houses of the wealthy citizens are generally surrounded by lawns and gardens, showing the taste and refinement of the people. The environs of the city are of marked beauty. Facing the Strait of Juan de Fuca, the long entrance to the British Columbian harbour and to the American waters of Puget Sound, is the natural park of Beacon Hill, from which the snow-capped heights of the Olympian Range in Washington, and the great dome of Mount Baker, form the background to a landscape which is much admired by the thousands of tourists who visit Victoria from all parts of the world. Besides being a residential place, the capital is important as a business and shipping centre. It is the first port of call for the great liners of the trans-Pacific service to Asia and the Orient, and the coast steamers for the north, and for the great freight vessels which journey from Europe *viâ* Cape Horn. Not far away is Esquimalt, forming the western suburbs of the city, with a fine harbour and fortifications which are among the strongest in the Empire. Esquimalt was the naval station for the British North Pacific fleet, but except for one or two ships the fleet has been withdrawn. Indeed, it is a noticeable fact all down this Great Pacific Coast, wherever we may journey, that the white ensign of Britain is regrettably non-conspicuous. Esquimalt has now been taken over by the Canadian Government as a Dominion naval base, and with recent Imperial developments and the creating of a Canadian navy will doubtless become of great importance as a centre of sea-power.

The commercial capital of British Columbia, and the city with the largest population (eighty thousand), is Vancouver, upon the splendid land-locked harbour. It is also the terminus of the Canadian Pacific Railway, and from this great seaport of the Empire the fine Empress Line steamers sail for Australia and Asiatic ports, forming the complement by sea of the Canadian Pacific by land. From Vancouver the railway system of Canada and North America stretches eastwardly to the Atlantic Ocean, from three thousand miles

THE PARLIAMENT BUILDINGS AT VICTORIA, BRITISH COLUMBIA.



away, and southwards to the confines of Mexico and Guatemala; whilst the steamship lines give passage to Panama and all the ports of North and South America. The people of British Columbia are of marked British character and descent, as observed elsewhere; and in common with the Canadians generally, they differ from the character of the Americans in a marked degree. Notwithstanding that the boundary between the two countries of Canada and the United States, in the west, is only the imaginary geographical one of a parallel of latitude, law and order are much more respected, and life and property safer, on the Canadian than on the American side. The lynchings, bank-holding-up, and train robberies of the United States are scarcely ever heard of as occurring in Canada; for the Canadians have inherited in a much greater degree the British characteristic of holding the sacredness of human life. Yet both nations have much to learn from each other. Both are conquering for civilization those splendid new worlds fraught with such unending possibilities, working on steadfastly each in their allotted portion of the vineyard, in strenuous good-fellowship.

XI

BRITISH COLUMBIA : A BRITISH HERITAGE

IN the foregoing chapter we have observed the varied and truly remarkable range of topography and natural resources of this Pacific-fronting region which has fallen to the dominion of the British people upon this great coast. Its mountainous character and its peculiarities of healthy climate give rise to varied and attractive natural conditions which, unlike the regions of Spanish-America generally, render it a fit home for a people of white imperial race, a counterpart of their progenitors in the far-off British Islands in similar latitudes but distant meridian.

Let us examine British Columbia from an "imperial" point of view; considering first of all its mighty railway systems—existing and building.

If there are two railways which should appeal to the imagination of the traveller in general and to the British citizen in particular, they are those two great trans-continental routes from the Atlantic to the Pacific littorals of the Dominion of Canada; routes of which one, the famous Canadian Pacific, has been in operation for a quarter of a century, and the other, the Grand Trunk Pacific, being pushed westward with all possible expedition to its completion in 1911. He who cares anything about the British Empire should recollect the great geographical and economical importance of these giant railways; and I will endeavour, briefly, to describe their salient points.

The Canadian Pacific Railway is 3000 miles from shore to shore; its conception and construction in the face of geographical and financial obstacles must always lead in the romance of history of railway building; its existence is of such importance as a public work as is only equalled in

SHIPPING AT VICTORIA, BRITISH COLUMBIA, TERMINUS OF THE CANADIAN PACIFIC RAILWAY.

magnitude by such works as the Suez and Panama Canals. Mainly, what did it do? It linked together and brought into federation the enormous provinces of British America, tying them together with its steel ligature into the largest political entity in the New World—an area vaster than that of the vast United States, its southern neighbour; and the Dominion of Canada is the “biggest thing in creation” on that side of the globe, to borrow the American simile. “We all know how the Canadian Pacific Railway helped to make a nation,” said the Prince of Wales at the Guildhall. More; here was the unplanted granary of the Empire, the most extensive area of land suitable for wheat-production remaining in the world—and wheat-growing, let us remember, is synonymous with civilization. These monstrous, fertile, unoccupied plains may be looked upon now as tributary, in great measure, to the Great Pacific Coast. It is, moreover, an imperial route to the Far East; to Asia, Australia, Africa, India. Four hundred miles of unknown land north of Lake Superior; a gigantic wilderness, considered uncultivable there; twelve hundred miles of uninhabited prairie; six hundred miles of the mighty barrier of the Rocky Mountains which cuts off the Great Plains from the Pacific slope—all this had to be surveyed and built, from the relatively small existing eastern system. But the obstacles created by nature are not generally more serious than those put in the way by man—that is man as represented by the financiers who hold the purse-strings. Whenever you come, kind reader, to the capitalists of London with a proposal to build a railway, you will find the axiom to be true that “corporations have no souls,” nor have they, as a rule, much imagination. For the first thing they ask—it is not an unnatural question—is as to what is the population of the region to be traversed. Well, in the case of the Canadian Pacific there was no population worth mentioning in the great region of the west which it would cross—a mere bagatelle of fifty thousand white people on the fringe of the Vancouver coast. What did the London niggards reply when approached for money?—They said that it spelt bankruptcy for the Dominion of Canada, which was backing it! And as for the London papers, *Truth* said (Sept. 1881) that it would as soon credit a scheme “to

subscribe hard cash for the utilization of icebergs, and that Canadians must know it is never likely to yield a single red cent of interest on the money sunk in it." Another "imperial" statement of the same journal was, "This Dominion is, in short, a fraud all through, and is destined to burst up, like any other fraud"! For these asseverations, however, *Truth* made amends long ago.¹ Even a Canadian opposition journal, in the country itself, indulged in the picturesque asseveration that the line "would never pay for its own axle-grease"! But the soul of Canada had already come into being, and the Canadian people themselves provided twenty-five million dollars in subsidies for the company, and gave it an empire in land grants of twenty-five million acres, and more than six hundred miles of railway already built in older Canada. The result of this was the world-record in railway building. Can you imagine, good reader, the building of *six miles a day* of new railway? This was done on the prairie section, and the last spike of the line was driven, four years before the contract time, on July 24, 1886, by a man whose name is now among the most famous of empire-builders.² To-day the railway embodies more than ten thousand miles of line; whilst the "axle-grease" has been paid for easily in the annual earnings, which amounted last year to more than seventy-one million dollars. So were the stick-in-the-mud financiers and black prophets of London confounded!

Of the scenic wonders of this line it would not be possible to dwell at great length here, but they have been well described in many books and pamphlets dealing with British Columbia. The line traverses the great ranges of the Rocky Mountains, the Selkirks and others, as described elsewhere, and crosses the three Canadian Cordilleran systems at two culminating elevations of 5,299, and 4,308 feet above sea-level respectively, whilst its maximum gradient is 237 feet to the mile. Elsewhere I have given some particulars of comparative elevations of the highest points of trans-Cordilleran railways of the Great Pacific Coast of North and South America, and it will be seen how favourably the Canadian

¹ *Journal of the Royal Society of Arts*, June 1909: paper by Mr. Obed Smith.

² Lord Strathcona.

SAW-MILLS AT NEW WESTMINSTER, BRITISH COLUMBIA.

Pacific compares with these, in point of low altitude of its summit-passes.

The trade of British Columbia, and its sea-borne importance and value to this region of the coast are growing rapidly, and are of much interest to the student of these sunset lands. I will quote from particulars published by the Canadian Pacific Railway Company in this connection, as follows—

“The trade of British Columbia is the largest in the world per head of population. What may it become in the future when the resources of the province are generally realized and actively developed? In 1904 the imports amounted to \$12,079,088, and the exports totalled \$16,536,328. In 1906 the imports were \$15,748,579 and the exports \$22,817,578, or a total increase in the trade of the province of ten million dollars in two years. The leading articles of export are fish, coal, gold, silver, copper, lead, timber, masts, spars, furs and skins, whale products, fish oil, hops and fruit. A large portion of the salmon, canned and pickled, goes to Great Britain, Eastern Canada, the United States, Hawaiian Islands, Australia and Japan; the United States consumes a large share of the exported coal, and immense quantities of lumber are shipped to Great Britain, South Africa, China, Japan, India, South America, and Australia. A large inter-provincial trade with Alberta, Saskatchewan, Manitoba and the Eastern Provinces is rapidly developing, the fruit grown in British Columbia being largely shipped to the Prairie Provinces, where it finds a good market. With the shipping facilities offered by the Canadian Pacific Railway and its magnificent fleets of steamships running to Japan, China, New Zealand, Australia and Hawaii, backed by her natural advantages of climate and geographical position, British Columbia's already large trade is rapidly increasing. The tonnage of vessels employed in the coasting trade is 8,488,778 tons, and of sea-going vessels carrying cargoes to and from the ports of the province, 4,405,052 tons. The Canadian Pacific has two main lines, the Canadian Pacific Railway and the Crow's Nest Pass Railway, and several branches and steamboat connections on the inland lakes, besides its large fleet of ocean-going and coasting steamers. The railway mileage of the province is about 1,600 miles, being one mile of track

to each 250 square miles of area. The prevailing prosperity of British Columbia is due in no small measure to the progressive policy of the railway, which has in so many instances anticipated local requirements by extending branch lines to isolated mining camps and timber districts where development was being retarded for lack of transportation facilities. These branches are being steadily extended into new territory, the most notable being the Nicola, Kamloops and Similkameen Railway from Spence's Bridge south-eastward. This important line is now operated as far as Nicola, giving access to new coal mines recently opened, and to an extensive territory rich in coal, copper, gold and silver, as well as agricultural grazing and timber lands. Besides operating passenger and freight steamers on the Kootenay, Arrow and Okanagan lakes, the Canadian Pacific Railway maintains a large fleet of ocean-going and coasting craft, many of the ships being models of their class. The coast fleet, including fifteen vessels, plies between coast points from Victoria, Vancouver, Seattle, Nanaimo, Ladysmith, Crofton and Comox to Northern British Columbia and Alaskan ports. The Royal Mail Empress liners, world-famed for their speed, comfort and safety, make regular voyages to and from British Columbia ports and Japan and China, while the Canadian-Australian liners give a splendid service to Hawaii, Fiji, New Zealand and Australia. The Canadian Pacific Railway Company's Pacific fleet is being constantly increased by the addition of new vessels, some of which are built locally, while others are constructed in British ship-yards—several ships are now on the stocks, freighters and fast passenger boats, to meet the growing requirements of the service."

The Grand Trunk Pacific is the other stupendous railway undertaking. It is to be recollected that the line just described traverses the southern part of the Dominion and emerges to its terminus on the Pacific Coast at the southernmost seaport of British Columbia, near the United States boundary, leaving untapped the enormous region to the north. Whilst, therefore, that giant was perfecting its strength the eyes of the Canadian people were looking northwards, and the conception of the Grand Trunk Pacific came. Again the Canadians gave their support. The line of the

THE BEGINNINGS OF A PACIFIC COAST LIVERPOOL :
THE PORT OF PRINCE RUPERT, TERMINUS OF THE GRAND TRUNK PACIFIC RAILWAY.

wheat-producing zone had been pushed northward to regions never dreamed of in earlier years; new and inexhaustible wealth of minerals in districts which owed their being to the Rocky Mountains were found to exist; vast forests for timber and for pulp were explored where the white man had never trod before; and the sneers of those who had scoffed at the birth of this new giant of the railway world were soon turned to a desire to share in its promise and its future. The Grand Trunk Pacific was incorporated by Act of Parliament in 1903, and under agreement with the Canadian Government its purpose is to complete a line across Canada—a great part is already built—with an estimated length of 3,600 miles, with huge branches running up to Hudson's Bay in central Canada, and to the Yukon and Alaska in Western Canada; the whole forming a project which has never been surpassed in magnitude.

Population?—Well, the financiers did not say so much about it this time. Immigrants are pouring into the country from Britain, Europe and the United States (which latter fact I beg leave to comment upon later), and the first issue of the bonds in London for the construction of the railway were applied for ten times over!

The route of this great "all-red" empire-linking railway, whose building and future fire the imagination to contemplate, debouches on to the Great Pacific Coast, passing through the middle of British Columbia to its terminus at the seaport of Prince Rupert. "Prince Rupert! I never heard of it!" you might well exclaim, good reader, with almost every one else. No one had ever heard of Prince Rupert until the engineers of this great undertaking examined it and decided upon it as a terminus. Yet it is a good harbour, on a coast which, as British Columbia, does not possess many favourable ship-havens; so good a harbour that it possesses some of the greatest advantages for ocean shipping that can be found along the whole earth-encircling line of the Great Pacific Coast. This port of Prince Rupert is 550 miles north of Vancouver and 50 miles south of the southern extremity of Alaska—of that part of Alaska which absurdly shuts off the sea from the upper part of British Columbia. Here has been laid the foundation of a great

future—city, streets, squares, houses, hotels; a city and an emporium and *entrepôt* which its creators say—and we may believe their prediction will be verified—is destined to become the greatest wheat-shipping centre in the world.

It is to be recollected, in this connection, that the coast of North America has been getting, ever since we left it at Panama, farther and farther towards Asia. We are nearer the upper part of the globe, and the meridians have approached each other considerably: Prince Rupert being near the 54th parallel. Consequently this new trans-continental line will possess the shortest route to Asia, effecting a saving of two days' sail in the journey from Liverpool or Atlantic-American ports to Asiatic ports. Into the construction and economy of the line another factor enters—the important one of the crossing of the Rocky Mountains and its determining gradients. A thorough exploration of the Rocky Mountain passes was made by the engineers, resulting in the selection of the Yellowhead Pass with the remarkably low elevation above sea-level of only 3,712 feet, giving a maximum gradient of only twenty-six feet per mile.

The possibilities of haulage and commerce by this new route have been well set forth by the president of the Grand Trunk Pacific, and its importance to the region of the Grand Pacific Coast, and I will quote from this as bearing strongly upon the subject. The remarks are tinged, to a certain extent, with natural enthusiasm for that particular line—an “imperial” enthusiasm, however.

“Bear in mind, please, that railroads are not now built as the earlier trans-continental roads were built, up hill and down dale, on an unballasted roadbed of mud. What we require to-day, and what the travelling public means to have, is a first-class roadbed with such low gradients and wide curvatures that our trains can be run at very high speed with perfect safety. We carry our road from Winnipeg over the Rockies to Prince Rupert with a maximum gradient of twenty-one feet to the mile going west, and twenty-six to the mile going east. The immense economy in hauling freights with gradients so remarkable, every railway man must recognize. We shall be able to put two thousand tons of freight into Prince Rupert from Winnipeg behind a single

TERMINUS OF THE GRAND TRUNK PACIFIC RAILWAY AT PRINCE RUPERT, BRITISH COLUMBIA.

engine. We expect that our easy gradients, which are due not only or chiefly to our 'generous expenditures,' but to our possession of the Yellowhead Pass through the Rockies, will in a few years twist around a great portion of the wheat export trade of the North-west, and with the opening of the Panama Canal in 1914 send wheat to Europe (let alone Asia) by way of the Pacific. At present the wheat crop is either hurried to the ports on the great lakes, Duluth, Fort William, and Chicago, during the few weeks between threshing and the closing of lake navigation in November, or it is held up for six months in elevators at a considerable cost, or again, if it is carried through to the eastern seaboard in winter, when the St. Lawrence route is closed by ice, the long haul through heavy snows makes the operation difficult, costly, and even disastrous both for the railway and to the farmer. West-bound from Saskatchewan and Alberta to Prince Rupert, the grades are easy; there is very little snow in winter, so that when the Panama Canal opens in six years I look to see Prince Rupert one of the very great grain ports of the world. I have more than once ventured the prediction that in my lifetime we shall haul to the Pacific as much grain as we shall haul to the Atlantic. The volume of traffic coming out of the new North-west, if we may judge from the way settlers are already swarming in, will throw far more business upon our existing lines than they can possibly handle. The present cultivated area is but six million acres. As yet we have but scratched the surface. We shall require very shortly to do what the Canadian-Pacific is already doing in Manitoba, that is, double-track our road to enable us to handle the traffic. Thus, the diversion of a large portion of the far western wheat trade will advantage every section of our road; it will enable us to give settlers much lower rates, because we shall even up our loads, sending full cars both east and west instead of only east. While we send cattle, grain and minerals west to Prince Rupert, we shall haul back east the coal and the lumber which the settlers on that three-hundred-million-acre farm need."¹

The western division of the Grand Trunk Pacific from Winnipeg to the Pacific Ocean is 1,756 miles long, of which

¹ *Journal of the Royal Society of Arts*, June 1909.

the prairie section, extending to Wolf Creek, Alberta, *via* Edmonton, takes 916 miles, and the mountain section from that point to Prince Rupert on the coast 840 miles. The prairie section region has been picturesquely described as "Canada's Bread Basket," comprising as it does some of the choicest wheat-growing areas. Into this region crowds of capable and experienced American farmers are pouring, having sold out their farms in the United States. Indeed, both here and on the line of the Canadian Pacific the country is being settled up by American farmers, who have brought both wealth and experience into the country, and who, in the majority of cases, are taking the oath of British citizenship. So marked has this immigration become from below the border that the name of the "American Invasion" (or even the "American Peril") has been applied to it, and the views expressed that it is a menace to British nationality and sovereignty. Out of 147,000 immigrants admitted into Canada in the fiscal year closing in March 1909, 53,000 came from Great Britain, 60,000 from the United States, and the balance of 34,000 from continental Europe; and whilst the American element predominated it can scarcely be said that it would swamp the British element. In the current year 25,000 homesteads are being taken up by Americans from the United States; and indeed a good deal of the best land has been acquired also by American syndicates.

Now there are two points of view from which the British imperialist may regard this so-called American invasion, and the taking-up of colonial land by emigrants from continental Europe. The first is that Canada and the British oversea states generally require population, and that it does not matter where it comes from. The second is that in giving away this land the colonies are freely giving away what is imperial property. I have myself brought forward this view, and at a meeting at the Royal Colonial Institute in London in May 1909, during the discussion of a paper upon Imperial Emigration, which was read before a large audience. I brought this view forward prominently. In my speech I submitted that "every foreigner, however worthy, who takes up a homestead in Canada or Australia, before every

FRUIT GROWING IN BRITISH COLUMBIA

British citizen is provided for, is being permitted to rob some equivalent British citizen of his birthright.”¹ This might seem an extreme view, but it is to be recollected that these splendid lands and resources which are now being granted with such facility to all comers will not last for ever. In a short time this freehold British land will have been disposed of. In reply to this contention of mine the Canadian representative pointed out that it was quite true that Americans were being invited to take up land, but that “a large percentage of them were returned Canadians, people who had been in the United States from five to twenty years, but who had never given up allegiance to the old flag.” There are, however, many immigrants purely Americans who are going in : “American farmers, anxious to secure land on the Canadian prairie, are now crowding into Saskatchewan and Alberta. So great is their number that the Dominion Government last month had to increase its staff of custom officials along the International Boundary.”² Now this contention of mine that British oversea land should first of all be allotted to people of British birth, before foreigners are allowed to acquire it, is one which has obsessed me greatly during some years’ travel and study of imperial conditions, and I published, a short time ago, a pamphlet on the subject entitled, *Your Share of Empire: A New Imperial Doctrine*, which has had a considerable circulation. The “new doctrine” which I have brought forward is that the unoccupied lands of the Empire overseas should be considered to be the property of the people of the Empire, and that a tangible share of such land should be reserved for, or allotted to, every inhabitant of the British Isles before allotments are made to people of any other race. The *modus operandi* of securing this tangible share of empire, or one method at least, I have expressed as follows, and I think the importance of the subject may warrant its quoting : “Let every district, town, or parish in Great Britain begin now and mark off a slice of land in Oversea Britain and hold it in perpetuity for itself; let working capital be provided by loan whose interest might be met by voluntary taxation

¹ *Journal of the Royal Colonial Institute*, June 1909.

² The magazine *Britannia*, May 1909.

(or in any other way), and the areas of land be worked as industrial enterprises for their own benefit." Thus every town or district throughout Britain might create its counterpart, its own special property, in Canada or elsewhere, and profit by it; applying the profits of its working to the care of its people at home, reduction of taxes and abolition of unemployment. New centres of industry which should ensure work and a proper standard of life for all would be created. Would it be possible to stir Britannia from her apathy, from her indifferent regard of her "submerged tenth" and her "sweated" poor, and overcrowded dens, mean streets, and an appalling army of unemployed? On the one hand we have gangs of men marching about the streets proclaiming to civilization that they have nothing to do and nothing to eat. We have the figures of statisticians telling us that *seven-tenths* of our population of Britain come under the heading of "poor," and that one in fifty is a permanent pauper! Great Providence! are we a wretched tribe of savages, such as I have seen wresting a living from rocks and thorns in the desert? We are not; the Empire is capable of supporting all its people in plenty. We have great wheat plains untilled, great forests uncut, mountains of minerals unworked, thousands of miles of river unfished, and tenantless town-sites by the hundred; whilst a large proportion of our imperial race rots away from insufficiency under the very shadow of the British forum! Who are the custodians of empire?—how can they account for their stewardship whilst these things be? It is nothing but a question of organization and the dictates of a common humanity, or common sense plus the imperial spirit, to apply this landless man to this manless land. Wake up Britannia!

Greatly obsessed as I have been, and shall ever be, by this grave imperial matter, I brought it forward again at a crowded meeting of the Royal Society of Arts in May 1909,¹ during the discussion of a paper upon Canada and British Columbia as a field for British investment and settlement. In this paper the splendid resources of the great dominions were well brought forward; her minerals, forests, wheat-plains—everything that Providence could possibly bestow to

¹ *Journal of the Royal Society of Arts*, June 1909: before quoted.

BIG TREES IN STANLEY PARK, VANCOUVER, BRITISH COLUMBIA.

make a people prosperous. The possibilities of profits and dividends, the allurements for investors, capitalists, and companies were well depicted—mines, plantations, industries, all waiting but the touch of capital and enterprise to yield up profits. But not a word was said as to the possibilities for that huge class of British citizen whose heritage the Empire is equally, who have neither capital, nor initiative to establish companies. I speak not only of the poor, but of the great bulk of toiling citizens whose ordinary grey horizon offers them nothing. I therefore took it upon myself to raise a single voice, and said, "I wish to lay stress on the more imperial side of the question; that up to the present the matter has been considered only from the point of view of paying dividends into private pockets, and that it ought to be possible to make use in a practical way of these millions of square miles of rich territory for the millions of depressed citizens of Great Britain; and that a way must be found of allotting some tangible 'share of empire' to all those of our people who require it."

There is little obstacle to this plan except that of the initial expense, which a fraction on the rates would cover, and—the present apathy as regards such matters. Such centres as London, Manchester, etc., could create for themselves in this way great permanent profit-producing properties, which might, in the course of time, pay their rates for them and banish the condition of unemployment, poverty and its consequent expense, once and for ever from their midst.

If, however, the constituted authorities were too apathetic to take up their share of empire, this could be done by forming Oversea Land Clubs for the purpose of acquiring colonial land areas. Thus, groups of ratepayers or inhabitants at home should be urged to mark off slices of territory in Canada or Australia, and hold them as a heritage for themselves and their children. Time will increase the value of the land, which will cost them little or nothing now. Capital must be obtained to inaugurate work and improvement, and valuable properties would be created, belonging to the people, which would yield them an income, absorb their unemployed, afford them an interchange of life and scene, and raise the status of British civilization. Wake up,

good people! This land will not always be available; we must be asleep to let it slip through our fingers. The custodians of empire are letting Americans, Germans, Italians and anybody else take it, as fast as they can get rid of it. Wake up and take it yourselves; your forefathers won it with their blood and energy—have you no portion in it? It is true that Britain has, in granting self-government to her colonies, given away, practically, any voice in these matters of land tenure there, and as far as the ownership of the land is concerned is somewhat in the position of the unfortunate King Lear! But this need not weigh against action. Our Canadians and Australian kinsmen and all others of Britain Overseas are fast binding themselves part and parcel of the Empire; their land they offer freely, it is only yours to up and take it. Why are you—good British citizens of the lower class—why are you choosing to vegetate in back streets, or to sell half-yards of ribbons or pounds of cheese in petty shops, or addressing other men's envelopes in stuffy offices; penned in close suburbs, your only recreation the watching of a football match or other pusillanimous frittering away of time? Are you Englishmen? Are you part of the noble race of Britons who have possessed themselves of a quarter of the land area of the globe, who rule a quarter of its people, and whose voice dominates in the councils of the world? Are you of the men who have made modern civilization and upheld justice and right for the weak, and worshipped God in the pride of their race and power? The name of an Englishman is respected throughout the world—are you part of this noble race? You may be in name; you are not in nature if you do not rise up and take the opportunities Providence has bestowed upon you over all the nations of the world.

Look at our glorious acres of Canada, Australia, Africa; with material for food, and house, and clothing, and happiness! Go forth; even if you have to live in a log hut for a few years under those glorious Dominion skies before you are independent, it is better than withering in pusillanimous vegetating in some ill-paid job at home. Don't you know that you can become an independent landowner for the asking, and that you can grow up a valuable citizen of a country in whose progress you may take tangible part? Wake up,

young men! Club together and take up a Canadian homestead, and the generation you shall call to being will rise up and call you blessed!

And you, good governors of hospitals, and payers of old age pensions, and exacter of poor rates! why do you not acquire great slices of imperial property before it is all given away, and make it, by common-sense action, the basis of a permanent income for your institutions? Why should industrial success and profits go only to greedy private companies?

And mark you, good reader—who has had the patience to follow me in these exhortations—the future of our Empire depends to some extent upon it. A time is coming, the finger of evolution and circumstance points to it, when the people of Britain can no longer live by commerce—forty-five million people on a small island,—and when only those nations will be able to retain superiority who own vast areas of land for the produce of food substance. You are in the position of shipwrecked mariners on a raft, who will not recognize that the locker is emptying! If Britain is to survive it must be by making the most of her resources—her material of people and her material of land. Ask of the poor clerk or the wretched unemployed if he is proud to be a citizen of this glorious Empire upon which the sun never sets! You will see a growing socialistic sneer on his face. It is the duty of all custodians of empire to consolidate this British civilization and to banish the poverty from which all evils come; for this splendid Empire can maintain all its citizens in plenty, did we but make common-sense use of its resources. Who are the custodians of empire? We are all custodians and stewards of empire who have wealth, or power, or voice, or pen, to influence the betterment of our life and civilization. And you, good socialists and demagogues, who love to set class against class, why are you fighting only about the possessions of the heritage inside these small islands? Why do ye not turn your attention to some “Imperial Socialism,” and reach out for Land and Opportunity in Britain Overseas?

The present method of empire-colonization is not adequate. The haphazard system of the survival of the fittest, of the emigrants pitchforked by circumstance out into the

oversea province of the Empire produces a splendid nucleus of people, but it is far from being sufficient. The great body of people who ought to be benefited by the use of the imperial property are not in a position to make the effort unaided; they lack means and initiative, notwithstanding that under proper auspices they would be good material. So it is that the flower of the people of the emigrating class go, and the dregs remain. But it will be disastrous in the long run for the mother country to have its residue cast back upon it; the colonies may benefit, it is true, but we of imperial spirit want the Empire as a whole to benefit. The use of our oversea property and the applying thereto of our workless and overworked people must be organized. When will Britannia awake?

What is the attitude in which Canadians regard Britain and the Empire? It is one of remarkable loyalty and strong spirit of race-affinity as a whole. Yet there are other elements. In some cases the Canadians have professed to find themselves impatient of the methods and manners of immigrating Englishmen. They say that these go over and air their supposed superiority and endeavour to carry out their unchangeable British ways; and so marked did this attitude become that the sentiment of "No English need apply" came to being. To one who knows Canada it is evident that there is something to be said on both sides in this matter. The Canadians are hard-working and intelligent, with the future of a great nation before them, and they resent the attitude of Britons of a certain class (especially the wastrels of the upper class of England), who always say, "This is the way we do it in the Old Country," which seems to imply some pretence of superiority. There is much ground for Canadian dissatisfaction in this respect. The other side of the picture is that British methods and ideas are not without value for Canada; and the English character, when refined and conservative, is an acquisition for Canadians. The Canadians will find, when life becomes a little less strenuous, that it will be to their advantage to assimilate whatever they can of British tradition, literature and social culture. Even the "remittance man" possibly has some economic value in this respect! Do not be

offended, kind reader of Canada, at such an outlandish suggestion! If a "remittance man," son of a duke or lesser example of the British upper class comes among you do not kick him out. Why not regard him as an interesting specimen in (social) natural history; give him a home (a species of glass case) to live in and enough to eat (limiting his supply of alcoholic drink reasonably), laugh at him, but observe his characteristics as a specimen! But seriously, great toleration of British idiosyncrasy should be displayed. Canadians are a strenuous, hard-working and independent people: the present is the Canadian's work time; his coat is off (the Canadian never rolls up his shirt-sleeves though, and they used to laugh at me when I did it), and he is making money. But he wants to be more than a nation of farm-helpers and dairymaids; and British culture is his heritage, not to be spurned.

There are thousands of refined families in England who would gladly emigrate to Canada to escape the terrible pressure of life at home: the high rents, the rising cost of living, the insufficiency of employment for people of their class. These people would be a veritable acquisition for Canada, with their customs and refinement, the heritage of Britain's thousand years of civilization. In another part of this chapter I have brought forward my new doctrine of "Your Share of Empire" for the British citizen, bringing it forward that "*every British citizen is entitled to some tangible share of empire*, especially in a share of the unoccupied lands of the Empire;" and I have strenuously urged, in pamphlets and at public meetings, as previously set forth, that towns and parishes of Britain should acquire perpetual title to tracts of land in the colonies, to be held as a heritage for their respective inhabitants. If this new doctrine is slow of acceptance in Britain the Canadians themselves (as well as the Australians or South Africans) might set it going, by assigning areas of good land, naming them after the various counties of the old country: Devonshire, Middlesex, Yorkshire, etc., putting them into condition for habitation as far as possible, and then inviting or bringing over families from Britain to dwell therein. A stream of magazines, papers and general communication and influences, moreover, should

be kept up with the corresponding region of the Old Country, and thus the Empire would be sentimentally and physically bound together. I commend the consideration of this imperial, yet practicable, Utopia to Canadians.

And what incalculable imperial good the Church of England might do in the Canadian (or Australian or African) dominions. Have not the Canadians awakened to the fact that England is full of poor clergymen who barely make a living? Why should not the communities of Canada endow Canadian livings out of their plentiful resources of land, and invite our English parsons to occupy them: to bring over their own beautiful civilization and improve the tone of Canada? These men are the product of an old European civilization, tradition and culture which all the millionaires of American society could not produce; these young curates and grave older ministers, sowing the seed of God's word and civilization in sleepy English villages, are worth their weight in gold! There is no class or community in the world—clerical or lay—of such a high type of civilization (because English and Christian) as that which the English vicarages and parsonages contain. Yet England seems to value them little, for out of the twenty thousand livings—more or less—in England, there are only about 1,400 which enjoy more than four hundred pounds a year, whilst many hundreds of them positively are worth only about eighty pounds per annum. Spiritual starvation! Wake up, good Canadian friends: it ought to be easy to lure them over. They are the very genius of civilization of this Old World, and might be had almost for a judicious asking. You have energy, prosperity, land and plenty, but you lack civilizing and refining elements. It is not to be expected that you could have them yet. It would be well worth your while to arrange to invite over every British clergyman who would come, assuring him home, land, and an income among you. They will bring in a refinement which will be of incalculable value for you, and which you cannot produce yourselves. Look at the United States below your border: they suffer even more than you from that dead level of mediocrity which is inevitable in a new world which has chosen to cut off the traditions and civilizing streams of the old. For you the

British flag which waves over Canada ensures you a continuance of these streams, which will also bring gentlemen among you, not only sturdy labourers and money-getters.

It is true that the agents of the Dominions are making strenuous efforts to obtain emigrants from Britain. The country is flooded with alluring notices setting forth the advantages of this or that region: with beautifully coloured pamphlets depicting azure skies and golden wheat-fields, homes which have sprung up in a year, giant potatoes and phenomenal bushels of oats to the acre; apple-laden orchards, maps, plans and guides—all are spread for the reading of the sluggish British emigrant. But, good Governors, you cannot reach those people who ought to be benefited by these means. You must take them with a firm and kindly hand and lead them forth, as a modern Moses, from this wilderness of insufficiency of modern England, forth into those lands which you—not untruthfully—depict as flowing with milk and honey, the promised lands to which the finger of God has pointed long, but whose opportunities man, his eyes bent on his muck-rake of sheer commercialism, has so far failed to see.

Instead of endeavouring to organize the poor immigrants and to prepare new centres for them the Canadian authorities are enacting regulations designed more and more to weed out the "undesirable" and fling them back in the face of the old country. So we read that immigration into Canada was cut down, due to the restrictive legislature from 260,000 in 1907 to 146,000 in 1908. Now as an Imperialist I maintain that every immigrant (with small exception of course) could be made a citizen of sufficient value to be allowed to remain under proper organization in the colonies, and that it is a barbarity to send people back who have once embarked for the New World.

Britain has now the most unique opportunity for assuring her own existence and advancing her civilization that any nation has ever possessed in the history of the world. As a country, Britain has reached her zenith, as an Empire: do we but awake in time to its possibilities, we may enter upon a life full and predominant. Canada and Britain are vital to each other's existence and well-being.

XII

ALASKA AND THE YUKON : THE LANDS OF THE MIDNIGHT SUN

ON looking at the map of the Americas we observe how the coast-line of the two continents, after extending up from the south-east in long, regular sweeping curves and tangents, with few indentations or irregularities (except the Norway-formation of British Columbia), turns suddenly in Alaska in a wide-sweeping hook towards Asia. Indeed, it begins to run towards the south again; throwing off a necklace of islands—the Aleutian Islands—from a long cape before turning once more to the north. This promontory and archipelago are the summits of a submerged coast range. At a former period, in the geology of long ago, America was here joined to Asia, and it is only separated even now by Behring Strait, thirty-five miles wide: a little more than the distance between Britain and France. In fact, it presents, on the map, the aspect of reaching out towards that continent where the cradle of the human race first was, as if it strove to form a passage for the germ of humanity to its own territories. Probably it did form a junction and a path for man and other *fauna* once.

We also observe that the great cordillera, which resolutely follows the American-Pacific coasts nearly across a hemisphere, curves round to the south-west in Alaska and has determined the form of the country. This giant curve of the cordillera in the north obeys a cause: it is the result of the flexure of the strata upon meeting the geological structure of Asia. The vast "earth-wrinkles" born of the globe's contracting skin in the tertiary ages, which have held their course for ten thousand miles, from Patagonia to Alaska, have terminated in a giant "dimple" here towards the top of the world. At this dimple, or "hinge," of the rock-

LAND OF THE MIDNIGHT SUN : DAWSON CITY ON THE CANADIAN YUKON
PHOTOGRAPHED AT MIDNIGHT.

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directions of the New World and the Old is formed the Alaska range, culminating in the splendid granite uplift of Mount McKinley—worthily named after a great ruler—the highest mountain in North America. This great snowy dome, far from the coast in the heart of Alaska, is thrust upwards into the blue and frosty sky of the Arctic to an altitude above sea-level of 20,390 feet. The low country surrounding it accentuates its altitude: more than nineteen thousand feet of granite and glaciated slopes rising upward from the land of ice and swamp within the region of the midnight sun.

Departing sharply from the north-westerly-trending coast of British Columbia, near that point where the great British-Yukon territory nearly—but not quite—comes down to the Great Pacific Coast; near that point where the 140th meridian W. and the 60th degree of latitude cross, the Alaska coast goes westwardly eight hundred miles or more to where, near the 165th meridian, it turns north again to Behring Straits. Huge, neglected, little-known pieces of territory here; and at the north-west corner is Prince of Wales Cape, so named by Captain Cook, who doubled it in 1778. Poor Captain Cook! To escape the winter of these frigid shores he went due south, a matter of a couple of thousand miles, to Hawaii, and was murdered by savages on the shores of that terrestrial paradise of palm trees and sunny sands, soft dusky damsels and cannibals. Could there be a greater contrast than these two places—Alaska and Hawaii? When I was in San Francisco I had the choice of going either to Alaska on the Yukon, or Hawaii, with remunerative possibilities attached to both. But the El Dorados of Mexico and Peru lured me on, as I have related elsewhere. I have always retained in my memory a snatch of doggerel which was brought to San Francisco by a Welshman I knew who lived in Hawaii, in a palm-thatched house with a dusky wife and a troop of children—at least that is the way he described it when asking me to call if I went that way! His song ran—

“I know a little Maui girl; she lives at Waikapoo,
With eyes so sweet and pearly teeth, and hair of a dusky hue,
Way down by Billy Cornwall's sugar mill this damsel does reside,
And I am never happy quite unless I'm by her side.

My love for you—wa-ha-ki-no,
Your love for me—há-pá-la-so,
Don't tell mamma—noui-noui,
She'll tell papa—koui-koui
Noui-noui,—pilla-kia—with—me—now !”

or words to that effect, the dialect of which I will not altogether vouch for. But pardon, kind reader, that I should have intruded this beach-combing doggerel into these serious chronicles.

From Alaska I have wandered rather far to the Sandwich Islands, but even they are part of the historico-geographical sphere of the Great Pacific Coast, 2,080 miles, as they are, to the west of San Francisco. So, indeed, are the Philippines, in a sense, right on the other side of the Pacific, as I have mentioned elsewhere. But to return to Alaska and the Yukon.

The coast-line from Puget Sound in Washington and Vancouver to Glacier Bay in Alaska is a scenic part of this great coast such as Europe might envy. Innumerable islands, forest-covered and crowned by mountains whose variety of form arrest the view, culminating in snow-clad mountain peaks whose glaciers come down into the Pacific waves. It might be paying Switzerland a compliment, some travellers have averred, to call that country the Alaska of Europe! The magnificent peak of St. Elias rears its ice-and-snow mantle from the very level of the tide up to an elevation of eighteen thousand feet, and so probably presents the greatest expanse of perpetual snow-cap of any mountain in the world. Two other points of the St. Elias range, Fairweather and Crillion, are both higher than Mont Blanc, but, like their sister peak of the chain, their brows are often hidden under the clouds of Alaska. The fogs and rains which condense from the moisture of the Japan current are, however, less frequent at certain seasons (there is a regular “tourist” season to Alaska), and early in the year the “midnight sun” is a feature of attraction to the globe-trotter upon the Alaska steamer's deck.

The enormous timber wealth of Alaska (mainly the Sitka spruce and hemlock), thanks to the heavy rainfalls, is less subject to forest fires than that of the Puget Sound region—fires, which so grievously devastate the forests of Oregon and

British Columbia, and whose smoke hides the beauties of the snow-clad Olympian range. The forests of the islands of Alaska, among which the steamer takes its way for days as along a mighty river, come down to the very shores, beachless, and terminating in a tide-stained, rocky wall. Neither bare hillside nor flat spaces are seen, for this archipelago of south-eastern Alaska bears out its character of submerged mountain tops, covered with forest growth.

Further towards the north, still in the south-east Alaskan strip which shuts out the sea from that part of British Columbia and the Yukon territory of Canada, the appearance of the country becomes arctic, with snow-fields and frozen rivers which extend inland from the coast. Snow-clad mountains and glaciers succeed each other as viewed from the steamer's deck, and icebergs float upon the quiet straits and inlets. The impressive glaciers of Glacier Bay is pronounced one of the most remarkable sights in the world. The beautiful and striking scenery of the Alaska coast is far from being inaccessible to the ordinary tourist, who can enjoy them at his leisure from the decks of the comfortable steamers which go there from Puget Sound ports. No doubt these regions will more and more attract the European traveller as they become known.

The area of Alaska is about 578,000 square miles, whilst the general coast-line measures four thousand miles in length. On the south is the Pacific Ocean, on the west Behring Sea, Behring Straits and the eastern end of Asia; on the north the Arctic Ocean, the northernmost part of the country being within the Arctic Circle. The western boundary of Alaska is the meridian of west longitude, 141° as regards the great body of the territory, whilst the narrow strip of coast and islands extending southward to latitude 56° N. was adjudicated by the finding of the joint British-American boundary commission of 1903. East of these long frontiers is the Canadian Yukon and the northern part of British Columbia.

Alaska also includes the adjacent islands, as well as most of the 150 islands of the singular chain of the Aleutians, which extend from the great peaked promontory of Alaska for a thousand miles—enclosing Behring Sea—towards the

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Asiatic coast of Kamchatka. Bare, rocky, and the home of volcanoes, some of which are active, are these northern desolate islands, formed by the submerged continuation of the coast range of British Columbia which traverses the southern portion of Alaska. The coast of Alaska in the southern portion has been described earlier. From Cross Sound (to the north of Sitka) the coast range shows precipitous faces whose snow-line is at an elevation above sea-level of 2,500 feet, giving origin to thousands of glaciers, whilst upon the two thousand miles of seaboard westward from that point into the Aleutian Islands there are ten active volcanoes and numerous mineral-charged, hot springs. Nature's forces, both heat and cold, are singularly active and blended above this "hinge" of the rock-formation of Asia and America. The glacier-forms and the rocks and inlets and islands are the edge of a vast interior wilderness. Ice-sculpture and ice-effects run riot; and islands of few or no inhabitants of the human world are encountered at every turn upon vast stretches of coast; and—

"All unknown its columns rose
Where deep and undisturbed repose
The cormorant had found;
There the shy seal had quiet home"—

as runs the ode to Staffa, that distant British isle in the same latitude, and nearly at the opposite side of the world.

The hair-seals are found along the whole coast-line; whilst the fur-seals are taken at their breeding-place of the Pribilof Islands. Other resources of the Alaskan coast are its fisheries, whilst on the eastern shores of Cook's inlet deposits of lignite (brown coal) occur, as well as on the Alaska peninsula and elsewhere. Gold, of course, is the main product, and that which of recent years has made Alaska and the Yukon famous. The well-known Treadwell Mine near Juneau with a large quartz-crushing installation yields high profits, working upon great ore-bodies whose value is only ten to twelve shillings per ton of ore.

The total population of Alaska is somewhat over sixty thousand souls, of which about half are whites and a quarter Eskimos, the rest being Indians. The Eskimos of the Aleutian Islands barely number two thousand. The climate

ALASKA : GLACIER NEAR CHILCAT, ON THE ROAD TO KLONDYKE.

of Alaska presents some marked contrasts. At Juneau and Sitka—chief places on the south-east Alaska coast-strip and archipelago—the mean temperature is about 50° F., and the thermometer rarely falls below zero; whilst in the interior the summer temperature rises at times to 90° , and in winter go down frequently to a depth of 40° or 50° F. below zero. In the interior there is little rain, but on the coast the rainfall ranges from eighty-three to a hundred inches. It is to be remembered that an enormous range of territory is embodied in Alaska, and that the south-eastern strip, although most known at present, is but a fraction of the whole.

The shores of Behring Sea and the Arctic Ocean in Alaska are low, level lands of sixty to a hundred miles in width; whilst in the interior lies the mountainous region of the Alaska range—a compound strata of sedimentary rocks from the palæozoic to the tertiary periods, as determined by a recent geological expedition from the United States. The culminating point is the high Mount McKinley, earlier described. The great Yukon River, which rises in the Canadian-Yukon territory, flows through the heart of Alaska, right across it, and empties into Behring Sea, south of the famous strait, flowing over more than thirty degrees of latitude. The Kowak is a tributary of the Yukon, and on this river the subsoil ice rises vertically above the water to 150 feet—a common feature of Alaska. In the low, damp wilderness of central Alaska the timber is the white spruce; and upon the limit of the timber-line there is grass pasture at the head of glacial streams where the caribou and the moose find food, whilst the wild mountain sheep and the grizzly bear also have their home in this undisturbed northern environment.

Sealing has been an important industry. "Come with me," said the skipper of a seal-hunting steamer as we conversed together in the office of a San Francisco hotel. "Put five hundred dollars into the venture and come up to the Alaska Islands: here you shall make your fortune in seal-skins. I have got a patent harpoon-gun calculated to knock spots off any seal in the Arctic!" Whilst I did not fail to lend attentive ear to the enterprising seaman's sanguine offer, I did not accept it. The frozen north never held attraction

for me, I told him, unless (which was a very remote chance) I might head an expedition to the Pole, or sail through the North West Passage! The story of Franklin has always remained with me since the days of boyhood—

“The cold north hath thy bones, and thou,
Heroic sailor-soul;
Art passing on thine happier voyage,
Towards no earthly pole!”

So the skipper and his crew sailed away: I saw him go from San Francisco's wharf. His ship—or another on a similar expedition, I did not learn which—never returned to the Golden Gate, for it was wrecked somewhere in the Aleutian Islands! However, it was not that I feared having to eat Arctic lichens, as Franklin and his companions did, instead of the beefsteaks of San Francisco hotels. I have often enough suffered hunger in the deserts or forests of Western America, from California to Chile, and suffered other privations which fall to the lot of the adventurous traveller on occasions.

Instead, I took a sail around the Bay of San Francisco with an Italian fisherman, whose boat I sometimes hired—the picturesque, lateen-sail boats which look as if they had just drifted in from some Italian or Sardinian harbour, and the equally picturesque buccaneer-fishermen, their owners, Italians with high sea boots and crimson sash, which are a feature of the San Francisco sea front. And when I landed I took my stand upon a long, stretching wharf on piles, such as abound there, and looked towards the south. For it was the south which attracted me: Mexico and Peru were the far-off lands which my fancy haunted—the great plateau of Anahuac, the Andes and the Amazon. And my dream was later fulfilled, for I have heard the leaves of the plátanos murmur by the banks of the distant Marañon, and have trod snowy summits of the Andes of Peru where human foot never trod before—matters, perchance, of some satisfaction to that “rolling stone” which gathers not the early lichens of wealth.

But on San Francisco's wharfs and in its hotels yet another allurements was dangled before me. “Vamos, mi amigo,” a Spanish voice said, the voice of a Spanish friend I had made

there, who had but a few weeks before alighted on the wharf from a Hong-Kong ocean liner, having come from Manila. "Let us go to the Philippines; you, an English engineer, will make a fortune there." Many times he repeated this exhortation, always, with Spanish generosity and politeness, opening his cigar-case simultaneously and offering one of the delicious Manilas which he had brought with him—and many a time I questioned him—avid of adventure—about his far-off island under the Captains-Generals of Spain. For this was just before the famous Dewey and the fall of colonial Spain. And my friend unfolded tales—true I doubt not—of great possibilities in those summer isles of plenty. Then he detailed to me the object of his stay in San Francisco. There was to be an international exhibition in the city: one of those evanescent "white cities" with which the world is so familiar; and the Government of the Philippines had charged my friend with the office of commissioner for the Manila exhibit: and cigars, hemp, natives and other interesting matters (which I will shortly mention) were coming over.

The Philippine Islands are a long way from San Francisco and the Great Pacific Coast—something like eight or nine thousand miles. But historico-geographically—if I may be permitted the term—they are much allied thereto. Magellan, whose vessels circumnavigated the world after discovering the straits which bear his name and the ocean which he called the Pacific, died there. Plate-ships and galleons, harassed of Drake and bearing untold wealth, went that way, spreading their wings upon the long ocean trajectory between Lima or Panama, or Acapulco, and Manila, and for three hundred years these great islands lived under Spanish civilization, until the famous Dewey brought down the flag by defeating the antiquated Spanish fleet in Manila Bay. It was a revelation for the Americans to establish government in these islands. Their ideas, which until then had gone little beyond the parish pump's requirements, were forced to germinate and expand into "un-American" paths, and generals and school-marms were pitchforked out to rule and teach the dusky Filipinos, a work which they strove steadfastly and well to accomplish, but which has proved

a problem undreamt of, and impossible under the ordinary methods of the United States. But I anticipate. My Spanish friend begged that he might engage me on the spot as engineer-in-chief of the Manila exhibit. Without committing myself I inquired what the Spanish Government would expect of me. From his reply I gathered that the duties would not be onerous, consisting principally of going to the place when I felt inclined and making free use of the best Manila cigars! Imagining possibly by my non-committal demeanour that the post lacked allurements, the Spaniard added some further particulars. "There are twenty Filipino girls coming over," he said, "native girls, to make cigars in the exhibition." He went on to say that the native girls were exceedingly pretty and amiable, and (although dusky, of course) very fond of Englishmen, and that many of my countrymen in Manila had large families with their native consorts. This interesting matter he concluded by saying, in the inimitable fashion of the colonial Spaniard, "I am sure they will love you. I answer for them all, I give them to you; they are yours!" . . .

I must again express regret, kind reader, for having thus wandered from the subject of cold arctic Alaska to that of warm-blooded Filipino girls, and to make amends I will return at once to the strenuous life. If anything more strenuous than the Yukon gold-fields and the building of the White Pass Railway can be found upon the whole length of the Great Pacific Coast I have not heard of it.

It was in 1896 that gold was discovered on the Yukon River, and miners flocked in rapidly to the diggings. So much gold dust was obtained by those first on the field that the miners, who had been obliged to hoard it in old meat-tins and anything else, in their tents or shanties during the winter, were extremely anxious about getting the yellow metal to the San Francisco or Seattle market, as they honestly thought that there would be a glut of gold and that it would be of no value! I happened to be in San Francisco when the first shipment of gold came down, I think in 1898, and the rush for Klondyke—situated on the Canadian Klondyke River (in the Yukon territory), which is a tributary of the great Yukon River of Alaska—is now a matter of ancient

THE CANADIAN YUKON TERRITORY : WHITE HORSE RAPIDS NEAR LAKE BENNETT, ON THE ROAD TO KLONDYKE.

history. Boxes of gold-dust and nuggets came down by every steamer, and the excitement was intense—everybody wanted to go.

But Klondyke was a terribly inaccessible place, in the heart of an uninhabited and inclement region, which no one had ever heard of until gold was found there. There were two ways of getting to it. First and easiest was that by sea from Seattle or San Francisco, round the coast of Alaska for three or four thousand miles to St. Michaels, at the mouth of the Yukon River below Behring Straits, and then up this great fluvial way for 1,500 miles, more or less. But this way is only open for a few months in the year, during the summer, whilst the voyage against the current, in the small and scarce river steamers, was slow, and accommodation precarious. Dawson City, it is to be recollected, is some nine hundred miles up the Yukon River, over the Alaska border in the Canadian Yukon territory, and is in the region of the midnight sun. Circle City, so called from being close to the Arctic Circle, in latitude $65^{\circ} 40'$, is about 150 miles nearer the mouth, and not far beyond this the great waterway touches the Arctic Circle.

The other route to the Klondyke was by sea for one thousand miles from Seattle or Vancouver to the head of the canal or fiord known as the Lynn Canal, and here the difficulties commenced. Skaguay, famous in the annals of Klondyke, is situated here, a town on a gravel flat backed by the snowy mountains of the coast range. From this place two passes gave access to the region beyond, which led to the promised land of Klondyke—the White Pass and the Chilcoot Pass, leading to Lake Bennett, upon the Upper Yukon; and from this point navigation was performed down the rapids in small boats built on the spot. But the White Pass was a terrible place, and took heavy toll of men, merchandise and horses. Indeed, as the rush of adventurers, pouring into Skaguay and pouring out over the pass increased, the trail became blocked; horses starved to death or broke their legs amid the rocks, and "Dead Horse Trail"—sinister sobriquet which it soon earned—showed upon one of its worst portions more than 3,500 dead horses upon a single mile of its fatal course!

And now the railway appears upon the scene. Skaguay had become a lawless place, partly due to the fact that it was a sort of "no man's land," for it was impossible to say whether it was in United States or Canadian territory, and the lawless element which collected worked their will under the leadership of a "bad man" rejoicing in the appellation of "Soapy Smith." However, some sort of authority was established when the engineers of the projected railway arrived in 1898; a Vigilance Committee was formed, and "Soapy Smith's" *régime* came to an end by the method of killing "Soapy Smith!" But ten thousand squatters had settled there and laid claim to Skaguay flat, and asked exorbitant prices for the railway's right-of-way. However, construction was soon commenced, although the rush to the mines being at its height it was difficult to keep any labourers on the line at all. On one occasion, gold having been discovered at Atlin, in British Columbia, close at hand, nearly 1,500 workmen left in a body. Moreover, the route of the line was so steep and difficult that a foothold could only be obtained upon the mountain slopes by driving in steel bars and attaching chains thereto. Further complications arose due to the dispute between the United States and Canada as to the sovereignty of the coast strip between Skaguay and White Pass—a distance of twenty miles. This, however, was later adjudicated by arbitration to the United States; whilst from the summit of the pass to the shore of Lake Bennett the route lay through land of the province of British Columbia, and thence onward through the Yukon territory, which is subject to the federal control of the Dominion of Canada. Thus the 115 miles of this railway runs through territory under three different jurisdictions.

The whole line was completed, notwithstanding all these difficulties, within the remarkably short space of a year, and the first train ran through from Skaguay over the White Pass—2,865 feet elevation above sea-level—and down to Lake Bennett in July 1899; thus establishing through means of communication between the Pacific Ocean and the navigable headwaters of the great Yukon River. From this point to St. Michael's at the mouth is 2,500 miles—distances are enormous, we shall observe, here—and as the White Horse

and other rapids below the lake only permitted navigation down stream, another seventy-five miles of line were built to their foot, whence clear passage is maintained to Behring Sea. Thus was this strenuous railway built,¹ but constant work is necessary to keep it open in winter from the heavy snow-drifts.

A great railway project for Alaska is that of bringing a line to the shores of Behring Straits from the British Columbia system and thence connecting with Asia by means of a train ferry across the intervening thirty-five miles of the straits, and on the Russian side to connect with the Siberian Railway at Irkutsk. When that is accomplished, good reader, we may take ticket in Paris for New York by rail! Stranger things may happen in our lifetime.

The native races of Alaska belong to two principal stocks: the Indian and the Eskimo. The Eskimos are subdivided into Innuits and Aleuts; the former inhabiting the northern and western coasts, and the latter the Alaskan peninsula and Aleutian Islands; whilst the Indians of the interior are the Athabascans, and those of south-east Alaska (fronting upon British Columbia) are known as the Thlinkets. These Indians at Sitka are under control of American missionary schools, and they are of intelligent ways and appearance, showing an initiative and adaptability, it is stated, after the manner of Japanese, whom they resemble somewhat in physiognomy. I have often noted the same similarity, especially in face and eyes, in the Indian of Peru and Mexico at times, and there can be little doubt of some Mongolian migration from Asia to Africa in prehistoric time, from the Old World to the New *viâ* Behring Straits. Even among the upper-class Mexicans, especially in the women, the Japanese air is noticeable in some cases, where even the strong Spanish strain has not banished it.

Alaska is isolated territorially from the rest of the United States. It must be looked upon as a country of extensive and almost unknown resources, which are but held in reserve pending the pushing forward of the advancing army of civilization (or commercial development at least) from the

¹ For a detailed account of this remarkable work see *Engineering Wonders of the World*: Nelson.

South. At present mainly an arctic wilderness, the conditions of climate are such as will by no means prevent the growth of a busy population when natural development requires such.

As to the Yukon, how many British readers know where the Yukon territory is, or whom it belongs to? If Alaska contains possibilities, much more so does the Yukon. This vast region, part of that enormous north-west territory belonging to Canada and the British Empire, which stretches eastwardly for a couple of thousand miles to Hudson Bay (itself a great sea in the middle of which Great Britain could be put down and permit us to sail round it out of sight of land), and northwardly—well, to the North Pole! It is a land of enormous river and lake systems—chief among them the Great Bear Lake, Great Slave Lake, Mackenzie, Coppermine and other rivers, which hydrographically, have their outlet to the Arctic Ocean. Think of it, good British reader! think of a land—the north-west territories—of two and a quarter million square miles in area, with a total population spread over it of about the size of that of a small town in England, for there are not more than one hundred thousand people in this great pre-continent. Some day, in the orderly march of the world, this great British heritage must become the home of a busy people of high civilization, for its resources are boundless and its climate a rigorous one such as the strenuous white man of Anglo-Saxon race adapts himself to. Truly the heart of man may take comfort in the enormous unoccupied areas of the world, waiting his requirements. Not yet need we limit our populations did we but learn to use nature's real gifts adequately!

Spiritual domination on the northern part of the Great Pacific Coast and areas tributary thereto may be said to be divided. The Russian influence in Alaska remains in nomenclature and religion alone. The natives of the Aleutian Islands have been converted to the Greek Church; and in Sitka (a matter, be it recollected, of some 1,500 miles away) the old Greek Church building, with its pictures of saints, is a point of interest for tourists who come up from Seattle or Vancouver by steamer, as is also the old Russian castle. In the northern portion of the American continents,

therefore, it is interesting to note, the saints of the Greek Church hold sway; as in the south do the saints of the Roman Catholic. But the British, or rather the Canadian, Church also holds spiritual sway in these lands of the mid-night sun; and the Archdeacon of Moosenee, the northernmost point of civilization, in the north-west territories, gave me the interesting information that his diocese claims spiritual jurisdiction over the North Pole! I should add that the worthy and reverend archdeacon is an Irishman.

NOTE.—These lines were in press a few days before the reported discovery of the North Pole by Cook and Peary.

XIII

COLOMBIA AND ECUADOR : THE LANDS OF THE EQUATOR

FROM the Arctic Circle to the equator the exigencies of our survey, good reader, now demand a sudden flight. We have visited the whole of that far-stretching part of the Great Pacific Coast lying northwards from our starting-point of Panama—a vast septentrional littoral with eight thousand miles of wave-beat, sunset shore. Our way now lies in southern seas. We must cross the Line, and ascend the majestic cordillera of the Andes, which forms the most striking feature of this meridional world below Panama.

Upon some of the attributes of the Republic of Colombia I have already lightly touched in describing the little Republic of Panama, formerly a province of this big land of Bolivar. Colombia is the first country in South America which we reach in going southwards down the Pacific Ocean. As we leave the harbour of Panama, the steamer passes amid the emerald isles which stud its bay, rising vegetation-covered from the blue Pacific in tropical beauty. The land recedes, the famous canal site and the low hills which top it fade gently away, reminding us as we look upon the vanishing horizon how small a thing in time and space even man's mightiest efforts are. Yet, as people of the progressive world, we shall "rejoice, as a strong man to run a race"—to think of the triumph over nature which the completing of the canal will be, and look forward to the few years hence when (*Deus volens*) the steamer which bore us from Europe or from the United States shall have climbed that lock-stairway of the isthmus to take its way through the Pacific waters. Mind, indeed, shall have triumphed over matter.

Now as to Colombia, I will not insult your intelligence, good reader, by reminding you that Colombia has nothing to do with British Columbia. It is a Spanish-American

republic removed about five thousand miles from that sea front of the British Empire, along this Great Pacific Coast. This information, however, may be useful for those eager shareholders in railway or mining companies whose operations are in Colombia, in order that they may not—with that apathetic lack of geographical knowledge common to their species—imagine that their investments are under the British flag!

The neighbours of Colombia are: on the north-west that recalcitrant daughter of its loins the little Republic of Panama, on the north the Atlantic waters of the Caribbean Sea, on the east Venezuela, on the south Peru and Ecuador, and on the west the Pacific Ocean. Colombia occupies, then, the north-west corner of the South American continent, and it has the unique situation among all the South American states of facing towards and having seaports upon both the Atlantic and Pacific Oceans. In addition to this, part of her territory lies upon the watersheds of both the Amazon and the Orinoco, those giant streams of the South American world. In Colombian or Venezuelan territory we have that singular anomaly of navigable communication between the tributaries of the Orinoco and the Amazon. Colombia, moreover, claims a frontage upon the main stream of the Amazon in territory disputed by Peru. The coastline upon the Caribbean Sea is 1,100 miles long, and upon the Pacific 400 miles; and the area of the country is calculated at about 475,000 square miles.

Considering now the topographical configuration, we find the characteristic Andine structure of paralleling cordilleras enclosing plateaux and profound river-basins: except that the lines of this parallelism bulge towards the north-east in this part of South America, rather than to the characteristic north-north-west. Indeed, in the equator-region the cordillera of this great coast has taken a vast ogee-curve, as if some "end pressure" in the world's contraction during its formation had caused a natural wavering from the marked general trend, as required by exigencies of spatial consideration. Three Andine folds thus traverse Colombia, known respectively as the western, the central, and the eastern cordilleras, the first-named skirting the Pacific Ocean and

entering the Isthmus of Panama. The great river valleys have also the Andine characteristic of outlet to the Atlantic and inaccessibility to the Pacific, as exemplified so strongly in Ecuador, Peru and Bolivia, lying to the south. The great Magdalena River, which debouches at Barranquilla on the Caribbean Sea, descends, by its great tributary, the Cauca River, through the valley of that name; the beautiful fertile region, in its lower reaches, of which the republic is justifiably proud. At the head of this valley, more than six hundred miles from the mouth of the river, is the town of Popayan, founded in 1538, at an elevation of nearly six thousand feet above sea-level; at the foot of the Purace volcano, whose crest towers upwards ten thousand feet higher, a hundred miles further south we encounter the mountain-knot of Pasto, one of the Andine counterforts. Whilst the Cauca River is navigable in detached portions, and for some two hundred miles from its mouth, it does not form a fluvial way or outlet for the valley in a navigable sense, and this fertile region must seek its outlet, as regards its rich upper portion, over the Pacific-facing cordillera by railway from the important town of Cali to Buenaventura on the coast. Here the Andes present a lower gap, whilst the distance to the coast, in an air-line, is only some fifty miles. With this line the primitive little port of Buenaventura on the Pacific will take on an added importance; for Colombia is much shut off by lack of natural harbours from the Pacific.

Otherwise the great Magdalena River descends between the central and the eastern cordilleras, rising like the Cauca at an elevation of fourteen thousand feet above sea-level, but with a very different regimen, forming, as it does, the main artery of communication through the country, being navigable for some five hundred miles by river-boats of stern-wheel type, and penetrating the regions of the forests. Honda, one of the principal cities, and the famous capital of Bogotá lie within this zone, but to reach the latter long stretches of mule-trail intervene between the river and the railway.

Bogotá is one of those various centres of Spanish-American civilization which loves to term itself the Paris of South America; but into these pretensions it would be beyond the

scope of this work to inquire. It is one of those quaint, Hispanic capitals such as the Iberian peoples have stamped upon the New World, with much of pleasing and distinctive character—plaza, cathedral and that mediæval social system inevitable upon class-distinction and priestly *régime* and the presence of a majority of Indian population. Nevertheless, Santa Fé de Bogotá, as it was formerly called, has earned a certain reputation as a literary and cultured centre. The city was so named—Santa Fé—by Quesada, the conquistador who founded it, in connection with the war against Mahomedan power in Spain by Isabella the Catholic and Ferdinand; and New Granada he termed the county from its similarity to its archetype. Bogotá is situated on a broad *sabana*, or plain, nearly nine thousand feet above sea-level, with a splendid temperate climate, atmosphere of marvellous clearness, and surroundings which are of much scenic value. The ridge rising above it close at hand forms the *divortia aquaum* of the watershed of the Magdalena and the tributaries of the Orinoco, which latter flow away eastwardly into Venezuela.

The population of Colombia is estimated at about four millions approximately, half of which are of white race. There are numbers of negroes and Zambos; the latter the people formed from the crossing of negroes and Indians. As to the people of the upper class they present the same characteristics which we have encountered in Mexico two thousand miles to the north, and which we shall observe in Lima, one thousand miles to the south. The Colombian, however, has retained a stronger conceit of the value of his civilization, and a sense of proportion is less common with him than with the Mexican or the Peruvian. The women of this class present the same charm of romantic disposition, beauty and attractiveness in their special sphere, which the traveller has learned to associate with the people of these regions of Hispanic-America. Of late years the *régime* of the Colombian president,¹ who has made a name for himself in Spanish-American affairs, has been one of greater order for the country—a condition which it was time should occur.

¹ Reyes.

Colombia is exceedingly rich in minerals. It shares with Mexico, Peru, Bolivia and Chile that extraordinary profusion of wealth in metalliferous and other minerals which is so strong a feature of the natural resources of these countries, whose existence is due to the Andes. Gold, silver, copper, coal, salt, sulphur, mercury, asphalt and others are found and worked. As to gold there are scores of little mills running upon great lodes worthy of elaborate modern machinery and large outputs—lodes which traverse the country for miles. Dredging possibilities are considered to be of great promise, and it is estimated that the *place* gold-bearing regions and those susceptible to dredging, are twice the size of those of California and New Zealand—famous centres of gold-dredging—put together. But roads, railways and sea-ports are all required before this great territory can be exploited. Vast portions of it have never been prospected, all tributary to the great lode-crossed, mineral-bearing ranges of the Colombian Andes, whose mountain streams in places may almost be said to be choked with gold. Some successful quartz-crushing mills are at work under British and American capital, and much more is projected.

The conditions of its topography and consequent climatic zones endow Colombia with those numerous species of the vegetable world which we are accustomed to associate with these Andine-formed regions. The three zones—hot, temperate and cold—in accordance with their respective elevations above sea-level, are the home of a rich, varied flora and fauna, containing most of the South American types. Up to the limit of the hot zone—two thousand feet—we have the tropical palm, sugar-cane, coffee, bread-fruit, mahogany, tobacco, india-rubber, agave, and other fibrous and medicinal plants. Upwards thence, the temperate zone, above eight thousand feet the soil produces crops more familiar to the European, such as wheat and other cereals, and potatoes; whilst above that belt lies the cold zone—so called rather by contrast, with an agreeable and tonic climate. Above ten thousand feet the cold *paramos*—dry, cold, inhospitable and inclement steppes—are traversed, crowned by the summits of the cordilleras; the perpetual

ECUADOR . SUNSET NEAR GUAYAQUIL.

ECUADOR APPROACHING GUAYAQUIL.

snow-cap extending from 15,500 feet to 18,000 feet above sea-level.

Colombia, as we have seen, is a country at present whose outlet is to the Atlantic rather than the Pacific Ocean. Barranquilla is one of its main ports of call, also Cartagena, both near the debouchure of the great Magdalena River. The mouth of this great river is broad and presents an attractive aspect, especially in comparison with the seaport of La Guayra, its Venezuelan neighbour, perched at the foot of a cliff. It was with intense interest that I entered those picturesque places and traversed the remarkable stone walls and fortresses upon the shore of Cartagena—walls which were built to defend, in centuries past, the city from the attacks of bold British and Dutch buccaneers of the Spanish Main.

But our business lies not on the Caribbean Sea, good reader, but adown the Great Pacific littoral and the tropic coast of Ecuador.

The northern part of the Ecuadorian coast is of cliff-formation, consisting of forest-covered mountains rising to one thousand feet or more; whilst the southerly part has some coastal plains. Tectonic activity plays and has played a leading part upon this northern coast, for here runs the colossal fracture-zone, the earthquake-producing belt whose awful settlements wrecked San Francisco and Valparaiso and did great damage in Ecuador. The towering heights of the Andes and the cordilleras which pierce the upper element, and the abysmal depths of the ocean into which the seaboard and the American continent plunges along the Great Pacific Coast line are responsible for these tectonic catastrophes—earth movements which nature so terribly translates in terms of the death of man.

Upon the Ecuadorian coast dark mist-clouds—a veil which the Equator flings ever at mid-day upon the verge of this sunset-facing land—hover upon the wooded mountains, and flights of pelicans (the *Alcatraz* of Spanish-America, whose beautiful, surf-polished bones, long, strong and of wondrous aërial structure, such as are worthy of study by aeroplane-building man of this new time, I have gathered on the beaches of Peru) sweep through the air, always in evidence.

Here the great Guayas River empties, the chief, and

indeed the only important navigable fluvial way, not only of Ecuador, but of the whole of this vast coast, giving access to the interior. Floating islands of trunks and plants swirl seawardly upon its turgid bosom; the floating home of alligators, sunning themselves contentedly upon their seaward voyage. The river is nearly two miles wide near its mouth, with mangrove-lined shores and islands whose verdant colour arrests the traveller's attention in comparison with the barren sandhills of Peru which follow.

The primeval forests of the western slope of the western Ecuadorian cordillera, with their colossal tree-trunks, huge leaves and enormous height, rise to an elevation of about four thousand feet, and thence the shrub belt appears, which, in its turn, gives place to volcanic districts whose mountain crests show their characteristic andesite lava formation. Next comes the lofty region of the *Paramos*, with their scanty vegetation, far above the level of the sea.

But let us first enter the great Guayas River. My first introduction thereto bore witness to a catastrophe, in which happily no lives were lost. Our comfortable steamer—one of the Chilean Line—was slowly ascending the turgid current, in order to call at the famous seaport of Guayaquil. Half way up a shrill whistle greeted us, and an old tub of a river steamer came out from the bank with the Clayton disinfecting apparatus on board. This apparatus, I must explain, consists of machinery for pumping sulphuretted gas into the holds of the steamers which ply in and out of all these ports, as a preventive against plague, yellow fever and other kindred pestilences, which are encountered on the coast from time to time.

We slowed up; the *Clayton* approached, and was made fast to our steamer, which, putting on steam, again advanced rapidly up-stream. As I was leaning over the rail, looking down on the tug's deck, I observed that a wave of water was heaping up against its prow, due to the speed, and this shortly began to climb the bulwarks and pour gently down upon its deck. This looked dangerous, and I called the attention of the man in the wheel-house to it. But whether he attached any importance to it or not, or what happened I could not quite tell, and the wave began to pour freely

into the *Clayton's* prow. A man rushed up now, with an axe, to cut the cable which united us, and others of the passengers on our steamer, who had seen the state of affairs, shouted to the officers to stop the vessel. Too late. The officer in charge did not grasp the situation quickly enough, and the waves poured freely into the doomed *Clayton*, and she commenced to careen to port. Shrieks and commotion arose from her crew of five; the man at the wheel abandoned his now useless post; the cable broke; the *Clayton* rolled slowly over, and a loud hissing of escaping steam and quenching fires arose as it slowly submerged. Fearing an explosion of the boilers, which would undoubtedly have wrecked our steamer, the passengers rushed to the other side of the deck, but no explosion took place. The wreck of the *Clayton* drifted astern with the current; the deck-house and upper workings broke away from the heavy hull and machinery, and I obtained a glimpse of the crew clambering for their lives on to the floating wreckage as the hull went down.

The alarm had now been given and our anchor was dropped. The steamer swung round on her cable with the current, and came to rest on a mud-bank—soft fortunately—and preserved an even keel. Shouts arose for the boats to rescue the crew of the *Clayton*, who, perched on the wreckage, were fast drifting down the river. I had already flung a life-buoy over in case any of them might be struggling in the water, and now I stood by to bear a hand, if it were necessary, with the boat. Bunglingly did they lower it, with two men therein, and it immediately swamped, throwing them into the water. Clinging on for their lives they were hauled up by the davit ropes, whilst another boat was lowered and successfully got away. Fortunately all the crew of the *Clayton* were saved; at roll-call none were missing, and the net result of the catastrophe was the loss of their disinfecting steamer by the Ecuadorian Government. The matter which most attracted my attention was the un readiness in lowering the boats, and it is hard to say what would have been the fate of the passengers of our steamer if disaster had overtaken it. As it was, we only lost six hours, reposing on the mud-bank until the next high tide.

The city of Guayaquil looks well as we approach it upon the bosom of its broad river. On the eastern horizon the sun is setting behind a range of rounded, forest-covered hills—gorgeous saffron and crimson against a dark olive green mass, as I saw it; and down at their bases cluster the houses, churches, wharfs and all the other elements of a busy seaport; whilst in the foreground the funnels and rigging of steamers and sailing ships complete the picture. At times, far away, the giant Chimborazo showed his snow-mantle among the clouds as I watched from the steamer's deck. Possibly the yellow flag of quarantine is in evidence in the harbour, as it often is here—plague or yellow fever. But conditions have vastly improved since the American *régime* at Panama; and the Spanish-Americans are learning that there is no excuse for such scourges. Quito, of course, is far away in the interior, reached now by railway—the famous Quito-Guayaquil line, known best to London shareholders, perhaps, by the eternal question of, “Will the Government meet the payment on the bonds this time?” So far (1909) I believe the Government has met them, which is satisfactory. Quaint-looking canoes float upon the Guayaquil River in part of the town, and singular *balsas* or rafts made from tree-trunks (an invention of the early Peruvians) descend the river, laden with merchandise, with the tide, and return on the flood whence they came. These *balsas* even journey along the coast to Tumbez and Payta in Peru, and it was one of these which Pizarro captured just before the Conquest. The city, with its long lines of streets and white buildings rising in terraces up the hillside, and characteristic water-life, presents a certain Venetian aspect; whilst at night the numerous lights, seen from the river, give it a startlingly important appearance, as of some great metropolis—which, however, it can scarcely be said to be, for its inhabitants do not number more than thirty or forty thousand. Nevertheless, it is a place of handsome and pleasing appearance.

It is interesting to recollect that we are here upon the westernmost part of the South American continent; yet, nevertheless, we are near the meridian of the eastern side of the United States, for Guayaquil is near the longitude of Washington, the capital of the United States. Here we

ECUADOR :

HARVESTING CHOCOLATE ON THE GUAYAS RIVER.

ECUADOR .

LANDING CHOCOLATE AT GUAYAQUIL.

are but two degrees south of the Line, whilst Quito is scarcely more than ten miles south of it. Guayaquil is the main trade and shipping centre for the republic, and the principal article of export is chocolate. Some nations owe their wealth to gold, timber, wheat or fisheries, but Ecuador owes it to chocolate, the bean of which is well termed *pepa de oro*, or "nugget of gold." Chocolate is the greatest source of the country's wealth: some thirty thousand tons annually are produced, all but a fraction being for export, possibly one-third of the world's supply. The *cacao*, or chocolate, plantations are situated on the alluvial soil of the hillsides and valleys of the Pacific slope, but the bean is, to a smaller extent, cultivated beyond the Andes. Other products of the coast zone are rubber, cocoanuts, bananas, and the singular *caña de Guayaquil*, which we find as a building material in Peru and Chile, whither it has been exported. These giant bamboos grow along the Guayas River, and attain a height of fifty feet or more, with a diameter at the base of six or eight inches. The cane has a singular power of storing up, in the divisions between its joints, quantities of fresh water, which it draws up from the swamps. Oranges, tobacco and numerous fruits are produced and exported to the neighbouring republics. The coast of Ecuador produces negroes, who flourish there almost alone among these republics.

All these products, let us carefully note, will disappear as we go southwards to Peru. The forest regions coming down to the water's edge in Ecuador will give place to sandy deserts in Peru; the India-rubber and the chocolate and the bamboo will have disappeared, and the negro will be scarce. Why?—we shall understand it by looking at the map of the Equatorial current, and observing how that cool stream, which has rendered dry and arid the Peruvian littoral, has struck this western bulge of South America before reaching Ecuador, and has been deflected to the west across the Pacific Ocean. The coast of Ecuador retains its native moisture and warmth in consequence. The great Humbolt or Equatorial current has given salubrity to the Peruvian littoral at the expense of fertility.

Off the Ecuadorian coast are the remarkable Galapagos

Islands, so named on account of the gigantic indigenous tortoises, or *galapagos*, found there. Much interest attaches, moreover, to these islands, from the fact that their natural history has never been interfered with by aboriginal man or animals introduced by him, so isolated are they, and this fact is of value to the consideration of matter relating to the genesis of species.

The interior of Ecuador consists of, first, the stupendous mountain region of the Andes, and second, of the Amazon forests upon their eastern slopes and base. The colossal series of snow-crowned volcanoes of Ecuador is the culminating orographical features of this mighty Cordillera (whether of North or South America), and Nature has lavished her most imposing mountain edifices, born of eternal fires and sculptured by eternal snows, upon this roof of the world where crosses the equator. The most remarkable contrasts of topography and climate are presented to the traveller here. Towering summits lie by the profoundest gorges, eternal snows lie gleaming above luxuriant forests, perpetual spring lies close to perpetual winter, and appalling deserts and wind-swept steppes alternate with smiling, fertile valleys. Nature has used her every resource and effect here, and the picture is complete in this land where the zenith sun shines down upon it.

Of the glory of the Ecuadorian snow-clad peaks famous travellers have sung the praises. Personally I have only seen them from afar, for my own journeys over the Andine snow-caps were made farther south, in Peru, where the Andes are, however, scarcely less stupendous in places, and probably less known. Among these mountain giants of Ecuador is the famous Chimborazo, the loftiest peak, whose summit reaches 20,825 feet above sea-level, and whose ascent, attempted by Humbolt a century since, was accomplished by Whymper thirty years ago. From the valley of Riobamba this glorious sentinel of the Andine world is seen in its most exposed beauty: its "monogene" structure and its glacier-sculptured form, together with its unusually sharply defined snow-line. Chimborazo stands upon the western chain, the Cretaceous Cordillera, and upon its western summit are the singular *nieves penilentes*, the

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CHIMBORAZO.

REVOLUTION



curious snow forms wrought of a vertical sun, nearly twenty thousand feet above sea-level. Of smoking Cotopaxi, Antisana, Tunguragua and a host of other giants of the Ecuadorian world we cannot halt to sing the praises here. The valley of Quito alone is encircled by twenty splendid volcanoes, from perfect cone to jagged crest, ranging through those forms familiar to the Cordilleran traveller in the snowy regions of the Great Pacific Coast. They are easily accessible to the view of the traveller now that the railway from Guayaquil to Quito is operating; and this great line zig-zags up to the Ambato plateau beneath the shadow of Chimborazo, the line rising to an elevation of 10,800 feet.

The river and forest zone to the east of the Andes is in keeping with the general stupendous structure of the country; and the great navigable affluents of the Amazon, which rise in and traverse Ecuador, falling into the Marañon and Amazon in Peruvian territory, will be of much value in the future development of this wild, rich region. Ecuador has ninety rivers, one-third of which are navigable in part.

The area of Ecuador is 116,000 square miles, and of its population of one and a half million souls about one-third are of mixed race—Spanish and Indian—with a small percentage of pure whites. In the Amazonian forests tribes of savage Indians dwell or roam, numbering about a quarter of a million. The educated class of the people of Ecuador are of virile and progressive character; but the country is kept back by political unrest. Quito has a population of some seventy thousand people, and stands 9,600 feet above sea-level, surrounded by its mighty Andine sentinels. The general appearance of the city is picturesque in the extreme, with its white walls, red-tiled roofs, and crowds of Indians in bright-hued *porchos*, native dress, and broad-brimmed, white felt hats; whilst llamas, mules, oxen and other beasts of burden pass ceaselessly through the streets. It is to be recollected that Quito was the northern centre of the great Inca Empire, connected with Cuzco—the navel of that empire (Cuzco means “the navel”), twelve hundred miles away to the south by the famous Inca Road. Thus in juxtaposition with each other to-day are the descendants of the people of that bygone empire, scarcely changed in

the four centuries since it fell, rubbing shoulders with men and women in European dress, and gazing into shop-windows replete with merchandise from London, New York, Paris or Berlin! Thus do civilization and barbarism run hand in hand in Spanish-America, as we shall also observe in Peru, and as we have seen in Mexico.

There had been a revolution in Ecuador when my steamer dropped anchor in the river before Guayaquil, and a new president was in power. "Down with President Red, up with President White! *Viva señores: una copita, caramba!*" Whilst I gazed upon the sea-front of Guayaquil came forth from the quay a double-decked river steamer, hung all over with bunting, and re-echoing with the strains of a band—a gay spectacle, but with a fearful list to port due to the crowd on deck, and I thought she would roll over. What was it? It was the newly appointed minister to the Court of St. James (as the minister himself informed me afterwards, for we became friends), who had spent much of his resources in the revolution and was to take his reward in this way. He had a very large family and a considerable number of young men with him, who were going to Europe to be educated, or to take up consular posts, and we became companions on the voyage. I retain stray recollections of those singular but warm-hearted people. They went on shore at every port to take drinks at the bars, and it was remarkable the number of *copitas* they consumed. When we got to Panama they asked my opinion as to first visiting New York, which city—they had heard—far surpassed London in wealth and magnificence! I endeavoured to advise them with strict attention to impartiality in international affairs, and suggested that their best course would be to visit London first. At their request at Panama—they spoke no word of English—I piloted them across the isthmus, promising to conduct them on board "a magnificent floating palace," the royal mail steamer from Colon to Southampton. So I purchased from the purse they handed me tickets for the whole company of them—men, women and children, obtaining a reduction for so large a quantity, from the steamship office. "We suppose this is an opera troupe and that you are the impresario!" said the steamship agent to me,

QUITO: THE PICTURESQUE CITY ON THE EQUATOR

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as he handed me ten per cent. rebate on the fares—an idea which, I confess, had not occurred to me before. These people kept with me to Southampton—they played violins and pianos beautifully, and gave a concert on board the steamer, and made speeches in Spanish which I had to translate, and when the white cliffs of Albion came in sight they opened bottles of champagne in my honour. But one of them—it was the first time he had travelled on a train, I think—pulled the communication cord of the boat-train to amuse himself, and the train came to a sudden stop at Basingstoke. Again I acted as interpreter, saving them a fine from the indignant inspectors and train officials who rushed up to see what was the matter.

But, kind reader, I have brought you home too soon. Not yet for us are the green fields of gentle, soothing England. Away to the south from Guayaquil we must go, along the heaving waves of that Great Pacific Coast whose surge-beat shores it is ours to follow.

XIV

PERU, THE LAND OF THE INCAS ¹

A DEEP blue sky with the flashing sunset on the one hand flaunting great banners of gold and crimson in the west—the colours of Spain which once held sway here—and on the other the far, faint, grey serrated edge of the Andes : so far that no form or shape except that of outline is visible—the true test of distance—and from the surf-beat fringe of seal-haunted and bird-covered rocky promontories, whence a faint solemn moan of breaking rollers comes seaward, a broad, undulating, rising, coastal zone, tinted in the colours of purples and burnt-sierras which depict its canyons and its deserts, stretches away landwardly for a hundred miles towards that solemn Cordillera. The green sea rises refreshingly to meet the steamer's prow ; not a sail or smoke-line is visible ; not a hamlet or plantation denotes the presence of man upon the seaboard, and only the quivering and throbbing of the engines disturb the solitude of the deck, which I am pacing alone, regardless for the moment of the odour of dinner wafted from the windows of the steamer's saloon. For who would go to a stuffy cabin whilst yet that glowing disc remains upon the great horizon of the west ? Is the sun-god of the Aztecs and the Incas of so little moment ? So Balboa gazed upon it ; so Drake, as hitherwards he passed, hot on the plate-ships' track, and so throughout our thousand leagues of Peruvian and Chilean coast journey do we see it : "So sinks the day-star in the ocean bed." It becomes but a semi-diameter as I watch now ; it is but a segment of a circle, and again it has gone entirely, leaving a momentary gap upon the darkening sea-line ; and turning from the sunset sky I look again to the Cordillera-bounded east : wild,

¹ Some of the particulars in this chapter are taken from a paper read by the author before the Royal Society of Arts in April, 1909, for which the society awarded him their silver medal.

rugged, mysterious. It is Peru: it is the land of Pizarro and the Incas. It is the land of gold; the famous El Dorado of the west, and we are indeed of commercial-minded clay if our hearts do not beat a stroke faster with some touch of enthusiasm. Peru!—the darkening shore-line might be peopled with the ghosts of mail-clad Spaniards, the sinister forms of inquisitorial Jesuits, whilst to seaward the phantom form of some Draconian frigate might be driving 'mid the wrack of the freshening breeze. What is that vessel in the western offing? is it the barque of some sturdy buccaneer from Plymouth? No, it is a piratical craft of another nature—piratical, that is, from the point of view of the British ship-owner, for it is a German steamer of the excellent Kosmos Line, which has been picking up cargo at the ports along the coast—ports served otherwise only by the British and British-Chilean lines.

But we are the true Phœnicians on this great coast; we, the British, who bring cargo hither, and transport it hence. Adown this endless coast from Panama to Valparaiso four thousand miles or more, these British-built, British-officered, and well-appointed steamers, tarrying from port to port, journey incessantly. The Phœnician mariners cast anchor repeatedly; alongside come the lighters of the natives, and the incessant rolling and grinding of the steam-winch, which forces the hold of our steamer to disgorge bales of Manchester goods, bar iron, cases of imported whisky, pieces of machinery, and other matters of miscellaneous merchandise; whilst in return we take on bales of cotton or sacks of sugar, from the plantations along the coast; bundles of *coca* leaves (for export for cocaine-making, growing nowhere else in the world), sacks of silver or copper ore from the mines of the distant Andes, which loom up in grey majesty to the east, and other singular produce of the coast, or of the mountains, and the forest regions beyond. Every package is laid bare to the eye of the passenger as it is swung up and over by the clanking chain; and when the great lighter is filled—with a free accompaniment of Spanish oaths—the rowers bend their backs to the sweeps, cleaving the rolling green waves, surf-crested, between us and the harbour-mole.

I have often asked myself which is the most pleasant mode

of travelling in South America—as perhaps many travellers have asked themselves—whether steamer, railway, or mule-back. This might seem at first a trite observation, but it has been often forced upon me by sheer contrast. When I have, after weeks of journeying in the saddle, among the snowy Cordilleras of the Andes or upon the appalling coast deserts of Chile or Peru, come down to a seaport, sold my mules and given away their trappings (perhaps to some faithful *peon* who has accompanied me), discarded the stout dress of the rider for the garb of more civilized man, and exchanged the rude fare of the sierra for the steamer's table, I have heaved a sigh of satisfaction. The small boat with myself and my steamer trunks—battered from much ascension by mule-bearing up precipices, and scored with the marks of raw-hide ropes which bound them on to the backs of refractory mules in that way which only the Spanish-American *arriero* can perform, has borne me away from the little port on the arid coast. I have said good-bye to the uniformed Custom House custodian, or the captain of the port, who, with true Spanish-American urbanity has kept me from too lonely British contemplation of the Pacific waves. I have purchased my last packets of native cigarettes and posted my last letter. The semi-Indian boatman bends his arms, the long wharf stretching out beyond the shallow Pacific beach recedes, as does the foam-fringed shore, whilst the rocky promontory, under whose shelter from the rolling sea the funnelled steamer lies, develops to my view. So we go seaward, to where *El Vapor* lies at her anchor. The swarthy boatman hoists up the battered trunks—and perhaps some sacks of mineral samples torn from those far-off Cordilleran mines, receiving with doffed hat and smile my added tip. Poor chap; the row was a stiff one, for the captain of the steamer (out of sheer perversity the captain of the port had said, though probably there were cogent reasons) had anchored miles off shore.

One thing dawns upon me as I hear again the familiar English tongue after my long sojourn among the Spanish-speaking peoples of the coast—the steamer is a bit of Britain. A Cockney steward, who has sailed these seas perhaps more times than Drake and all the famous buccaneers together,

takes my ticket and with respectful "Yessir" hears my requirements and assigns me a cabin.

To have a comprehensive idea of that great part of western South America which forms the republic of Peru its geographical character must be grasped. Peru is naturally divided into three zones—the coast, the mountains, and the forest regions respectively. First is the coast. This is a semi-arid strip of land between the Andes and the ocean, some 1,400 miles long, from Ecuador in the north to Chile in the south. The coast is beaten with a tearing surf, and, whilst there are numerous ports at which the steamers call, only three or four of them—as Callao, Chimbote, and Payta—are first-class harbours, the others being open roadsteads. This coast-zone varies in width about 90 to 120 miles, and is traversed by small rivers at great distances apart, which descend from the Andes to the sea. Between the cultivable lands and cities, which owe their existence to these streams, great arid deserts are encountered, for the Peruvian littoral is subject to the peculiar condition of having no appreciable rainfall, due mainly to the presence of the Andes, which mountains intercept the moisture-laden winds coming from the east.

The coast of Peru is a long barren stretch with few indentations of any magnitude, except the harbours already mentioned; and as we behold it from the steamer's deck we might ask ourselves what of value to man could come from so inhospitable-appearing a littoral. The ancient civilization of the Incas did not dwell here, and the use of the "silent highway" was unknown to them. Through countless ages the surges have beat upon the guano-covered and seal-haunted rocks, unploughed by the craft of man, save it were an occasional *balsa*, or native raft of woven rushes, such as the Indian of the northern part used for traffic to the Gulf of Guayaquil. It was a singular native craft of this nature—a rush craft with mat sails—which the ship of Pizarro overhauled near Tumbez; the gold and pearls it carried firing the imagination of the adventurous conquistadores. For the self-contained empire of the Incas had little use for the sea except for fishing; and as an example of the endurance and swiftness of the royal couriers it is recorded that the Inca

chiefs, in their palace at Cuzco one hundred miles inland from the coast, over the fastnesses of the maritime Cordillera, eat *fresh* fish brought in daily by the runners. The same is recorded of the Aztec Emperor of Mexico, Montezuma, in his capital in the heart of the country; but his fish came not from the Pacific but from the Gulf of Mexico.

To-day, between the cultivable lands and the cities which owe their being to these oases on the banks of the stream, the great arid deserts stretch, and along their seaward edge the Pacific surge beats ceaselessly, the silence otherwise unbroken save by the barking of sea-lions upon some peaked promontory, and the cry of the palmiped birds which fly in myriads at times upon the sea-line. I have observed, in places upon these great stretches of sandy wastes, areas of what once had been cultivated lands, and lines of driftwood much above the level of the sea. "What are these?" I have asked my mule-driver, and he replies that they are the result of the terrible "terremote" and "olas"—the earthquakes and tidal waves which have, in former time, devastated the Peruvian and Chilean coasts. As to the irrigation of the lands in the neighbourhood of the coast towns this is necessary, for the Peruvian littoral is subject to the peculiar condition of having no appreciable rainfall, due mainly to the presence of the Andes, as mentioned before, and partly to the effect of the cool equatorial current which impinges here upon the Peruvian coast. Due to these agencies the climate of the littoral is equable, cool, and healthy generally, and there is absolutely no natural vegetation—except a little grass and Algarobo scrub—the latter principally in the north.

Secondly, crossing this coast-zone, we shall enter among the foot-hills of the Andes, and ascend the slopes of the maritime Cordillera. The Andes consist of two, and in places three, main parallel chains, the summits of which are capped with perpetual snow. Between them, at high elevations above sea-level, are great plateaux, subject to heavy rainfall; and profound river-valleys, most of which have their outlet, not to the Pacific Ocean, only a hundred or two hundred miles away, but to the Amazon, and so to the Atlantic, three thousand miles away.

Thirdly, leaving these rugged and beautiful, if inclement,

THE CAMELS OF THE ANDES . GROUP OF LIANAS AT CUZCO, PERU.

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regions, we shall descend the eastern slope of the Andes and enter the boundless river- and forest-system of the basin of the Upper Amazon. This is a region of which large portions are still unexplored, and of which parts are inhabited by tribes of savage Indians, and it is generally known as the "Montana."

These three natural zones of coast, mountains, and forests, which I have traversed on repeated occasions, are exceedingly varied in all their conditions of topography, climate, and natural resources. The means of access to these last-named regions—an important point for consideration—must be considered difficult. But it is not to be expected that a country like Peru, traversed throughout its length by a great natural barrier of mountains, with passes generally at 15,000 or 16,000 feet above sea level, could yet be equipped very fully with roads and railways. Nevertheless two railways traverse the Andes, and others are projected or under construction. Of these two railways the northernmost is the famous Oroya Line, which, leaving tide-water at Callao, passes through Lima and ascends the Andes to an elevation of 15,660 feet above sea-level—the highest railway in the world—and within one day the traveller is taken from the warm climate of the coast up to the region of perpetual snow. The other Peruvian trans-Andine railway is some five hundred miles to the southward of the Oroya Line: and leaving the port of Mollendo, it ascends to Arequipa and Lake Titicaca, crossing the Cordillera at an elevation of 14,660 feet above sea-level, and running thence to the famous old Inca capital of Cuzco. Beyond these two important routes of travel the remaining railways of Peru are short lines from the seaports, crossing the coast-zone and terminating at the base of the Andes. There is, however, an important branch line from Oroya to Cerro de Pasco, where an important new copper-producing industry has been set going of recent years. As to the roads in Peru, there are practically none except the numerous mule-tracks, which give access to the towns and villages of the interior and the mines, and which are not practicable for vehicles. In some cases, as you journey along these roads, so precipitous are they, and so remarkably do they wind among the precipices and ravines, that the town to which

you are journeying is seen thousands of feet below you, a day or more before you get there. Perhaps you encounter a train of laden mules just as you are passing one of these precipitous places, and some care is necessary to avoid being crowded off the path or injured by the packages they carry, which stick out on either side of them. It does not soothe your temper to be prodded in the leg with the corner of a sheet of corrugated iron, or a baulk of timber, or a bale of merchandise! However, the dangers and discomforts of the trail are often compensated for by the grandeur of the scenery and the interest of the journey, especially in the mountain regions. Nevertheless, conditions of travel in Peru, away from the lines of railway, must be looked upon as arduous and difficult, although they do not present necessarily impossible obstacles to development.

To turn now to a description of the natural resources and products of the country, it will be advisable to describe these as pertaining to the three respective zones of coast, mountains, and forests. In general terms, agriculture and matters pertaining thereto are a greater source of wealth at present than minerals and mining, notwithstanding the great wealth of minerals awaiting exploitation. Indeed, Peru has been likened to "a beggar sitting upon a pile of gold," the meaning of which is that the country's natural wealth is vast; but capital and enterprise for its extraction are lacking.

The principal source of wealth and industry on the coast-zone is the growing of the sugar-cane and the manufacture of sugar and rum; the growing and export of cotton; and the production of wine. The Peruvian planters claim a high yield of cane and sugar per acre from the soil, greater than that of Java, Hawaii, or Louisiana; and the yield is given in Government publications as several times greater than that of any of those famous districts. The sugar estates are generally situated on the margins of the rivers crossing the coast-zone, and are irrigated by means of canals from these rivers. Among the most productive valleys are those of Chicama, Trujillo, Chimbote and Santa in the north; the Rimac valley, near Lima; Cañete and the Tambo valley, further south. A good deal of British capital is invested in the production of sugar in this zone, generally with gratify-

ing results; and many of the sugar estates, both Peruvian and British, are large and powerful concerns. Typical of the latter may be mentioned the Santa Barbara estate of the British Sugar Company, producing some twenty-five thousand tons of sugar annually, and involving the constant upkeep of ten thousand acres of cane. On most of the estates large quantities of rum are manufactured, much of which is exported to the interior and to Bolivia. Unfortunately the consumption of alcohol among the Peruvian and Bolivian Indians is an increasing vice, and is beginning to have a markedly injurious effect upon the native working population of the highlands. Upon these sugar estates, Japanese labourers are now being employed. Very few negroes, however, are encountered upon the littoral of Peru, and none whatever in the highlands, owing to the cold climate of the latter regions. Indeed, it is interesting to observe how Nature preserves the highlands of the Andes for the indigenous people. The negro will not go there, and the Chinaman is not plentiful. I once ascended from the hot coast-zone to the uplands, with a Peruvian negro mule-driver, whom I had employed, and his main desire was to finish the journey quickly, and get back to his warm village on the sands!

The sugar-cane flourishes up to an elevation—above sea-level—of 4,500 feet, on the Pacific slope. It is also cultivated, to a considerable extent, in the inter-andine valleys and the Montaña, or eastern slope, and is cultivated as high as six thousand feet elevation. The average value in recent years of the sugar export of Peru has been about one and a half million pounds sterling. The home consumption is about thirty thousand tons per annum.

Cotton cultivation is an important industry in the coast-zone, grown under irrigation. The plantations extend from the seashore to sixty miles inland, along some of the valleys, and the principal varieties grown are the Egyptian and the native kinds. Peruvian cottons are favourably known on the British market, especially the "full rough" and the "moderately rough," which are of excellent and unique qualities. The principal cotton-growing valleys are those of Piura, Lima, Ica, and Tambo de Mora. The annual value of the cotton export is in the neighbourhood of half a million

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sterling, and it is increasing; more land is being put under cultivation, owing to higher prices. There is some British capital invested in the production of cotton.

As regards the conditions of the coast-zone generally, it may be stated that the climate is good and temperate. Indeed, it is remarkable in this respect, as will be judged from the mean temperature, which ranges from 63° F. in the south to 77° F. in the north. No other country in the world in similar latitudes (3° to 19° S.) offers so cool a temperature, and the traveller coming from Panama and Guayaquil upon the same coast finds unexpected relief from the extreme heat of those places. Comparison between the Pacific coast of Peru and the Atlantic coast of Brazil in the same latitude shows a remarkable difference in favour of the Peru, Lima giving an average of 66° F. and Bahia 77° F. This condition in Peru is due to the absence of moisture, the proximity of the Andes, and the existence of the Humbolt current.

Agriculture upon this coast-zone can only be extended by means of further irrigation works, and this calls for foreign capital, and offers a remunerative field for the employment of such, especially in cotton-growing. The cities and towns of the littoral are largely dependent for their means of subsistence upon produce brought in by steamers and schooners, and the growing population calls for extended cultivation. The establishing of cold-storage and chilled meat depôts, both in Peruvian and Chilean coast towns, ought to prove a paying enterprise, according to investigations I have made, as it would tend to regulate the great fluctuations in the price of meat and other provisions, for all cattle are imported or brought down from the interior.

The principal inhabitants of the animal world on the Peruvian coast are the myriads of web-footed sea-birds—the palmipeds—the producers of the famous guano deposits, which have been so prominent a feature in the recent history of Peru. No nitrate beds of any importance have been worked in Peruvian territory north of Tarapacá, although some exist in Arica. The life of the Chilean deposits is generally estimated at about forty years, although it is possible that this is much under-estimated, and it has been stated that

new ground is available for a supply for a century ; but this is very doubtful. The resources of the Peruvian coast-zone must always be mainly agricultural, dependent entirely upon irrigation, which latter condition is by no means unfavourable, ensuring as it does a regularity in the crops. The area of land in this zone capable of such cultivation is estimated at fifty million acres, of which only one and a half millions are cultivated at present. Under the influence of water a large portion of the appalling deserts or pampas of this zone, which in some cases are as destitute of vegetation as the Sahara, can be turned into fruitful plantation, after the manner of California.

The next region to be considered is that of the sierra—the slopes and highlands of the mighty Andes of Peru. We have heard much recently about Tibet. Peru, indeed, has been well termed the Tibet of America, and the analogy is very marked. Great mountain ranges, divided by high, bleak plateaux, profound valleys, lakes, and swamps, all crowned by the stupendous summits and peaks of the Cordilleras, with a crest of perpetual snow—such are the Andes of Peru and Bolivia. Beautiful, solitary, rigorous, are these vast high regions, and the gleaming, culminating snow-clad peaks, tinged with the sunrise or sunset glow and piercing the blue heavens up to twenty thousand feet above sea-level, never fade entirely from the recollection of the traveller who has dwelt among them, or essayed their ascent. It fell to my lot to ascend and cross several snowy peaks and passes untrodden by human foot. However, in Peru, instead of opposition to travel, as in Tibet, according to the accounts, hospitality is encountered, or, at any rate, among people of Spanish descent. On some occasions, on arriving at a remote town and presenting my introductions—or even without such—the principal citizen of the place has prepared a feast for me and invited his friends, delighted at the advent of an Englishman on a scientific errand, in a place so cut off from the happenings of the outside world, and I retain pleasant recollections of their hospitality. On the other hand, among the Cholos and the Indians of some remote regions the greatest distrust and lack of hospitality is encountered, and nothing even in the way of necessary food can

be purchased. In some of my long journeys into these places, on one or two occasions I have been obliged to go without food for days, except what little remained in the saddle-bags, or to take it by force, leaving double its value in the hands of its protesting owners. This, however, is rare, and, as a rule, the Cholos of the most remote places are amenable to reason, once they know they are going to be treated with fairness, and not abused; and I have always told them that an Englishman, at least, always pays for what he takes! On long prospecting expeditions I have found it well to live as much as possible on what the country passed through afforded, carrying, of course, such essentials as tea, coffee, sugar, extract of beef, etc., in the saddle-bags of my men. Indeed, a few hints for intending travellers may not be out of place here; for on any tour of discovery, or examination of mining regions, reliance has to be placed much on one's own resources, as railways are soon left far behind. Such provisions as eggs, chickens, bread, or—failing that—toasted maize, potatoes, rice and fruit, can generally be purchased at the village, and, in the cold regions, a sheep can be carried along on mule-back, and pieces cut off as required (not a live animal, of course!). No traveller will ever venture forth into the Peruvian interior without his own saddle, which he will purchase in Lima, an English saddle being quite unsuitable, and an equally important part of your impedimenta is your folding-cot and bedding: on no account go without it if you intend to leave the line of railway. No great preparations for clothing are needed—an ordinary tweed riding-suit and leather leggings and shooting-boots are the main essentials, with a thick woollen poncho for the uplands and mountain regions, a thin white one for the coast deserts; and an indiarubber riding-cape for the rain. I know of no greater pleasure than, properly equipped with all your worldly belongings securely packed upon a couple of pack-mules in charge of a careful mule-driver, to start forth into those little-known regions of Western America, there to discover what Nature holds of use for science and for commerce.

The uplands of the Andes are inhabited by the hardy Cholo race, the descendants of the Quechuas and the Aymaras, who

formed the population of the Peruvian empire under the Incas. They live principally by agriculture and the raising of cattle, llamas, and alpacas, and the sale of wool, and also by mining. The singular and graceful llama, or American camel, is encountered everywhere near man's habitation in these high remote regions, and it forms the most valued possession of the poor Cholo, doing all his carrying trade and furnishing him, in conjunction with the alpaca, with the valuable commodity of wool, which is readily purchased for export to Liverpool. The annual value of the wool export is rather more than half a million sterling.

The Cholos and Indians inhabiting the Andine uplands—their habitat ranges from seven thousand to seventeen thousand feet or more in elevation above sea-level—have retained one notable condition from their Inca progenitors: they are independent land-holders. Each Cholo and his family is the owner of a small holding, which he cultivates with alfalfa, maize, potatoes, or whatever product the position affords, thus supporting himself and his family in a way which renders him practically independent of the governing white Peruvian race. The Cholo asks little from civilization, or at any rate from the civilization of the Europeans, who destroyed that of his former Inca rulers, which was certainly not inferior to that which governs him at present. Indeed, the main blessings of modern civilization, if such they may be termed, in those remote regions might be described in two words—priestcraft and alcohol! What these two words convey it is beyond the province of this chapter to discuss. The land system of these people is worthy of note, or at least the land laws under which they lived in the time of the Incas are, especially to-day in view of the question of small holdings in Britain. All the land was measured up and proper areas apportioned to every inhabitant, the area being increased as his family increased. They were obliged to work the land, and beggary, poverty, or destitution were not permitted, as every inhabitant was provided for and enjoyed his birth-right of a piece of land, by the working of which he could maintain his family. Taxes to the Incas were payable in goods, not money, and in goods—as clothes, arms, or other matters—such as the particular district afforded. Indeed, so

beneficent does the social system under the Incas appear to have been that it has given rise to the assertion that the primitive people of the Andes enjoyed a rule under their native princes such as has never been enjoyed by any Christian nation. To-day, all over the interminable slopes and valleys of the Andes these small holdings are encountered, abandoned in the greater part, owing to the extraordinary shrinkage of the population since the advent of the Spaniards. I have stood upon the summit of the hills as the sun cast shadows over their slopes, bringing into relief, with a singular chequered appearance, the innumerable small terraces, or "andenes," as these small holdings were termed, excavated on the upper, and banked up on the lower sides, to form flat places for cultivation. Many of these are used to-day, and the inhabitants of remote villages still elect their petty land-officials, whose duty it is to assign the use of the water in turn, for irrigation of the lands, as in the time of the Incas. But the greater part of them lie untenanted and abandoned, like the innumerable ruins of villages, cities, castles, and temples which the traveller encounters throughout this vast region of the Peruvian Sierra.

It is not within the province of this book to enter into much detailed description of the great monuments in stone which have been left scattered about the uplands of the Andes, extending over many thousands of miles of territory. I have dwelt upon them fully in my books upon Peru.¹ The Incas cut and carried great monoliths and erected buildings of cut stone of such solid beauty as excite our admiration even to-day, as we look upon their ruins; and wonderful roads and bridges. There they stand, these ruins, in marked contrast to the flimsy adobe structures of the present occupiers of the land—temples, palaces, fortresses, and strange buildings of religious and astronomical purpose, and we may stand there amid their crumbling walls, and mark, as did the votive priests of old, the sun-god of the Incas as it sinks in the Occident. Indeed, the romance of history and the romance of geography are more strongly linked together in Peru than in any other country of the Americas; for the civilization of the Incas and the structures which they made

¹ *Peru and The Andes and the Amazon.*

PREHISTORIC PERU AND BOLIVIA: MONOLITHIC DOORWAY AT TIANUANAKO.

and left, together with their environment of stupendous mountains and boundless plateau, a habitat from twelve thousand to sixteen thousand feet above sea-level, form certainly a conjunction of elements scarcely to be encountered anywhere else. The Aztec civilization, temples and environment in Mexico, three thousand miles away, are remarkable and unique, and similar in many respects to those of Peru; but they do not present the condition of great elevation above sea-level as does the work of the Incas. The city of Mexico, the highest point where Aztec stone structures exist, is eight thousand feet above sea-level; Cuzco, Tiahuanako, Cajamarca, Huanuco, and other of the centres of early Peruvian stone-shaping art range up to 11,500 feet, whilst some of the formerly unknown ruins of fortresses which I have visited are situated at more than sixteen thousand feet above sea-level.

The main groups of ruins of cities and temples are found along the line of what were the great Inca roads; one of which traverses the Andes longitudinally, along the line of least resistance—as was natural—paralleling the Cordilleran structure, the other following along the coast plains, in a more or less analogous direction. Whilst these roads, as I have pointed out elsewhere, were structures of great value and ingenuity, forming great arteries of travel and means of communication from one end of the country to the other, there is no doubt that their importance as engineering structures has been greatly overrated by the Spanish writers and others. They were indeed all that was requisite, for it is to be recollected that no wheeled vehicles were known to the Incas, nor did they possess any saddle-animal, nor indeed any beast of burden except the llama, an animal which is quite indifferent to matters of gradient and alignment of roads. As to the Indian postmen, the famous *chasquis* of the Incas, who, by a system of rapid posting on foot carried messages along these roads at great speed from end to end of the country, they were equally indifferent as to whether they went up a hill or went round it. Indeed the Cholo to-day, journeying on foot from place to place in these wild, rugged regions, soon leaves the zig-zag of the pack-mule trail below him, and makes straight for the summit of the

pass. Following the road on horse-back with my half-dozen Cholos behind, carrying their packs, I have sometimes missed them, when, on reaching the apex of the hill there they were a long way in front, waiting for me, having made a steep cut-off. I may remark here that the Cholo and the Indian of the Andes is a most exemplary bearer of burdens, ambling along at a shuffling pace with his fifty pounds without any sign of inconvenience. I have been gravely informed, indeed, by Peruvians of the sierra, that the Indian positively prefers to carry a load when on the march, and that if there does not happen to be one ready for his *quipu*, or carrying-net made of thongs, he puts some boulders therein instead! I am not prepared, however, to vouch for the truth of this assertion.

I have journeyed along these Inca roads in many places, and in fact they form the ordinary trail in some districts. Some of the main summits of the Andes are traversed by these roads; steps having been cut out and built up in the rock in the most inaccessible situations, leading up into the region of perpetual snow and crossing the very ice-cap in some cases, above the clouds. The principal of the two Inca roads, as is well known, extended from Cuzco, the "navel" or capital of the Inca empire, to Quito in Ecuador, a distance of 1,200 miles. Numerous cities were situated along this great route, some of which form capitals of departments to-day, such as Huaraz, Cajamarca, etc., others being abandoned and uninhabited groups of ruins, such as Old Huanuco and others, some of which had scarcely ever been visited by a foreigner until I went there.

The ruined structures of the Incas consist of temples, fortresses, palaces and dwelling-houses. The principal feature about these is their stone-masonry; the beautifully adjusted, and in some cases enormous stones and monoliths which the ingenuity of this people cut and carried, rivalling even the builders of the Nile and the Euphrates. The extraordinary fortresses of Sacsaihuaman, Ollantaimbo and others, are such as arouse the admiration of the traveller and the engineer. Hill-sides are terraced and ramparts built with huge, shaped blocks of stone, construction which could only have been carried out by the mandate

PREHISTORIC PERU : INCA FORTRESS OF OLLANTAYTAMBO.

of despot monarchs with a disregard of Indian labour and life. The most peculiar feature of their stone-shaping art, however, is the singular disregard of uniformity in the size and shape of the stone blocks; they all differ in form, not being cubes but polygons, so that each stone was necessarily cut to fit its fellows in the wall, probably by the laborious method of continually putting it on and off in the fitting process. Some of the monoliths are of great size; one of those at Cuzco being thirty-eight feet long and eighteen feet wide. No mortar was used, as a rule, yet so perfect is the joint between the stones that a knife-blade cannot be inserted. It has occurred to me, in examining these beautiful structures, that the method of stone-shaping was considered a nice and purposeful art; perhaps the giving of an individuality in shape to each stone obeying some custom or dictate now lost in the past. However this may be, all the buildings of the early Peruvians do not have this characteristic; some of the walls are built of ordinary cubical blocks of right-angled form. The arch was unknown; but long stone lintels were used over doorways, whilst columns have only been found in one group of ruins upon the coast. The observatories, and the pillars which were constructed about the country for the determining of the solstices by the Inca priests are in some cases still existing; notably the remarkable ruins of Intihuatana, where the sun "sat down," as the Quecha word translates it, upon a golden stool placed upon a column. But most of these columns were destroyed by the Spanish priests, who considered them things of the devil!

Speaking of astronomical matters, it was borne upon me very practically on one occasion in Peru that I was in southern latitudes. I desired to establish a true meridian, and so I overhauled my theodolite and prepared to observe the elongation of Polaris. I waited until night, but I must have been preoccupied with home letters (letters for far-off Devon), for I went outside into the clear night to find my star. Polaris, indeed! It was, of course, below the horizon. It had never been above it, or at any rate not since that period when the earth shifted its axis—if it ever did so! So I smiled to myself and decided to try another star another night, by the method of equal altitudes. The little crowd of

Cholos who had gathered round, eager to see what the "Ingles" was going to do, seemed to think that a performance of some kind was expected, or so my servant said. Willing to humour them, I turned the telescope of the instrument to the moon, which was shining, and let some of them observe the fair face of "La Luna" magnified thus by the glass of the theodolite. The sight afforded them matter for interesting speculation. "How far off is it, Don Antonio?" I heard them ask of my servant, an intelligent Cholo who had been with me for some months. But Don Antonio was non-committal. "Sabe Dios!" he replied, and this Spanish "God knows!" is generally a sufficient answer. After a while—"Is it the same moon that shines down in the Señor's (my) country?" So I took upon myself to inform them something of the movements of the planet. Coati the moon, and Inti the sun, it will be recollected, were both deities of the Inca progenitors of these people. Well might any one—Pagan or Christian—entertain affection for the sun on those snowy inclement steppes of Peru and Bolivia!

These high, bleak tablelands of the Peruvian Andes are intersected by fertile valleys, which enjoy a delicious climate in many cases, with semi-tropical fruits and produce in abundance, and in these favoured spots the towns, which form the centres of the white or mixed population (as distinguished from the Cholos and indigenous red race), have their being. Most of these towns are much isolated from the coast and the outer world, their only means of communication being the ill-formed pack-mule trails, which wind interminably over the great *punas*, or highland planes, cross deep valleys and precipitous-sided ravines and rapid rivers, and at times traverse mountain passes across the perpetual snow-fields of the Cordilleras. Nevertheless, their inhabitants live in contentment; living is cheap; the struggle for life is less acute than in the manufacturing cities of North America or Europe; and the poorer Cholo or Indian of these regions is a far less trying spectacle than the pallid and starving slum-dweller of New York or London! Foreigners may journey and live in these regions with entire security; and with a very small capital at disposal can amass wealth and property, in mines, plantations, and commerce.

The most enterprising foreigners in Peru are perhaps, as is but natural, Spaniards. I have known many Spaniards in Spanish-America, for they form a noticeable percentage of the foreign population of these countries. It is not as a rule, however, the best class of Spaniards which is encountered there; but rather the shopkeeper class—or perhaps they have become shopkeepers—merchants, ranchers and others. This is but natural. The blue-blooded *hidalgo* does not go there since the days of the viceroys: there would be nothing for him to do, and your Spaniard is not a traveller when there is nothing further of “conquest” to be attained, and the only member of the Iberian aristocracy in Mexico or Peru are the occasional diplomatic representative. Just as the educated Englishman rarely visited the United States until recent decades, so the upper-class Spaniard does not visit the lands of his old colonies much. Nevertheless, the Spaniard encountered there is often a good fellow and a shrewd *comerciante*; taking no wealth into the country, but invariably getting some out of it. Indeed, the foreigners in South America and Mexico may, in this connection, be broadly divided into two groupings: those who bring capital in and those who extract wealth from the country. In the first category are the British, the Americans, and some of the French and Germans. In the second, the Spaniards, Italians, Austrians, and of course the Japanese and Chinese; colonies of all of which peoples are found. As to the Italians, they are sometimes unkindly dubbed the “Chinese of Europe.” Nevertheless, they make excellent, hard-working citizens of the New Latin World, and are in demand as colonists everywhere. A former president of Peru once said, having in view the urgent need of immigration for that country, that they must have immigrants “even if they were bandits from Calabria.”

But to return to the Spaniards. They are generally distinguished by the multitude and profanity of their oaths. The names of the members of the Holy Family are ever profanely on their lips, in addition to ingeniously indecent words and allusions such as it would manifestly be impossible to describe within these chaste chronicles. The American (of the United States) can generally hold his own as regards

swear-words, and indeed he is unceasingly "god-damning" or giving tongue to indecent expletives, but he falls far short in depth and intricacy of oath to the man from Iberia. But the Spaniard works hard, whether it be behind the counter of his grocery or draper's shop in the cities, or whether in his ranch or hacienda in sugar- or cotton-growing lands, or whether at his mines, and shortly acquires a competence. He has, among other qualities, a remarkable power of getting a great deal of work out of the native or Indian population for very little pay!—a quality the German possesses to a certain degree, but which the Briton lacks. There is still much of the conquistador about the Spaniard, and Cortes and Pizarro dwell in every Mexican or Andine village!

Personally I have enjoyed a good deal of hospitality from Spanish settlers, in my long journeyings in these regions, and I retain pleasant recollections of them in this respect. They have brought out the best they had; for an English traveller nothing was too good, and there must be in the Spanish character some real regard for the sons of Albion—their ancient and resolute foes in centuries past on that Great Pacific Coast! One evening I was riding, weary and melancholy, for I had started early and it was late; the road had been rocky, and the deserts and defiles I had passed for that and two previous days, in my way up from the coast, had been sun-beat and parched. I longed for a cup of tea (please do not smile with scorn, kind reader, for tea is a wonderful restorer on such marches), but league after league went by and still my servant had said it was but "one league more" to the hacienda. These Peruvian mountain leagues, indeed, are, when you are tired, of great length, although a real Spanish league is but five kilometres, or three English miles and a tenth. The native of the Andes speaks of leagues, but knows not what he says, and when at a turn of the road I saw the hacienda still miles away upon the opposing side of a valley I felt it best not to say what I thought about his units of distance measurements. I can look back on many days of such rides, when but to set the teeth and steel the mind to patience and the body to further effort was the only way to arrive. For in the Andes when the glory of the morn has passed and the midday sun

has beat down upon your head and the cold evening winds (and perhaps rain or snow in the higher places into the bargain) have blown full upon you, then does the depression of fatigue begin to tell—the landscape becomes a cursed desert, and the rock-forms but stupid reiterations of a blind and brutal nature! . . .

Suddenly at a turn of the road the hoofs of my mule splashed in a mountain stream; beautiful flowery shrubs met overhead in a narrow cañon through which the trail was winding; fruit trees and flowers appeared—the gleam of the oranges and the ripening ears of maize; a dog rushed out from somewhere and an Indian woman peered from a hut door; and in a moment my mule clattered up a stony causeway towards a wide courtyard, flanked by the building of the hacienda. I saw a veranda with chairs upon it and an open window behind. And as I rode my tired steed beneath and pulled him up, a Spanish voice exclaimed, “Pase, pase usted, señor!” and a stout man in hacienda garb, with a horseman’s hat, descended there from the veranda. As he spoke he clapped his hands, the common signal in Peru for calling a domestic, and a couple of dependants ran forth to take my mule. Without ceremony I threw foot to earth and grasped the outstretched hand of the hacendado, and with many inquiries as to the road and the heat he conducted me to the balcony, and before I could say yea or nay he had brought forth a bottle and two glasses. “Una copita, por supuesto” (a drink, of course), and suiting the action to the word he pours out brandy and hands me one. We clink glasses. “Salud, señor.” “A la suya, señor,” and the fiery but restoring cognac disappears down our respective throats. Meanwhile, one of the *mozos*, or servants, without necessity of exhortation from his master, has taken my wearied mule, which is now—I know as well as if I had directed it—burying his nose in fragrant alfalfa; whilst I knew equally well that in the house full preparations for my adequate entertainment would have been set on foot already.

Now it is to be recollected that I had never heard, or scarcely heard, of my new host before, and that he had possibly never heard of me. Quite enough it was that I

was a *caballero*, a foreigner, upon the road, and that evening was at hand. His hospitality was, therefore, a disinterested hospitality, of the patriarchal kind which, alas! inevitably disappears in new commercial communities.

My host was a Spaniard: I knew it instantly from his bearing and his accent (as also from his oaths, which, however, he only used then in speech with his dependants), for the Spaniard's pronunciation of words betrays him immediately and marks out the difference from the Spanish-American. This difference lies mainly in the pronunciation of the "z" as "th" rather than as "s," and of the "c" also as "th" instead of as "s"—the latter method being the Spanish-American. There are other differences, equally marked, and the whole enunciation is more virile in the case of the Spaniard: more self-assertive. Well, I threw myself into his comfortable chair on the veranda and accepted a cigarette, and stirred from my mood to British-Spanish speech by his cognac and his welcome, gave him the wherefore of my journey thither, which was to examine a group of mines a day's ride further on within the Cordillera. His satisfaction was unbounded. "Hombre, que bueno!" he exclaimed, as who might say, "Man alive! what a good thing!" for the Spaniard always prefaces such a remark with "hombre" or "man." "Why, I am part owner of the mines; and *Ojalá*" (would to God) "that I could sell them to an English syndicate and return to Spain for a visit. I am growing old here!"

Now the good Spaniard's hospitality was reaping already some reward. It was a vast advantage for him that an English engineer, with connections with capitalists, should have come up from the coast to examine his mines. Had he been a churl I should have passed on, tired as I was, to some more humble stopping place; as it was, I thought of the words of an old ballad—

"Yet tarry, my son, till the burning noon passes,
Let boughs of the lemon tree shelter thy head;
The juice of ripe muscatel flows in my glasses,
And rushes fresh strewn for siesta are spread."

And the incident, good reader, brings us to these resources of Peru which ever have formed for the foreigner, and doubt-

less ever will form, the most alluring field of work and enterprise—the mines. This vast region of the Andes, embodies in Peru a mineral-bearing zone, 1,500 miles long and up to 500 miles wide; and within it every metal and mineral known to commerce is encountered. Silver, gold, copper, lead, quicksilver, coal, iron, zinc, petroleum, vanadium, molybdenite, bismuth, sulphur, nickel, cobalt, salt, and everything else are found and worked in Peru. Yet, notwithstanding this great wealth, the mineral industry at present is small relatively, although it is increasing rapidly, having triplicated itself since 1903. The value of the mineral and metal export annually at present is about three millions sterling. The backward position of mining is due to the lack of foreign capital, added to the slow development of means of communication, and to the fact that Peru has not generally enjoyed a favourable credit in European commercial centres—a condition, however, which is now being overcome to some extent.

The most widely distributed minerals are gold, silver, copper, lead and coal. Gold occurs on both the western and eastern sides of the Peruvian Andes, although as alluvial or placer deposits only on the eastern side. Indeed, Peru may be looked upon as an exceedingly important source of gold for the world's future needs. For engineering and mining purposes the occurrence of Peruvian gold may be divided into three classes; and these, in the relative order of their importance for present working, are—first, the great banks and deposits of gold-bearing gravel for hydraulicing; second, the exceedingly numerous lodes of auriferous quartz; and third, the areas of gold-bearing deposits susceptible to dredging. As to the matter of the geological origin of the auriferous material, I may say that the existence of alluvial gold is due to the disintegration of innumerable gold-bearing lodes and veins which traversed, and still traverse the rocks of the great Cordilleras. Geological epochs of heavy rainfall and orographic change, especially under glacial action, have caused the disintegration of these rocks as time went on, the gold contained having accumulated in the bottoms of the great lakes which formerly existed in the Andine plateau and valleys. A remaining instance of these is the great lake

basin of Titicaca, which even to-day forms a hydrographic entity, with no outlet for its waters except that of evaporation. In some cases these enormous deposits of auriferous earth and gravel were subsequently upheaved by orographic change, and at the present time there exists a series of such deposits along the very summit of the Peruvian and Bolivian Andes, upon the actual water-parting of the continent, at elevations above sea-level of fifteen thousand to eighteen thousand feet. It is not to be supposed that the remarkable situation of these deposits renders them unworkable. Some of them which I have visited have been worked by the Indians for centuries, and in one or two cases modern hydraulic systems of "monitors" have been installed there. In some cases, as it is natural to suppose upon the water-parting, water is scarce and the climate is rigorous at this altitude. As giving an idea of the magnitude of these deposits of auriferous earth, it may be stated that a calculation has been made of a single one that it contains more gold than has ever come out of the whole of California.

Lower down on the eastern side of the Cordillera are some huge deposits of gold-bearing gravel under more favourable conditions for working, for at lower elevations there is abundant water and timber, whilst the climate is mild, and food products of any nature may be grown—conditions not encountered on the high summits. One of these great auriferous deposits, which I made a special journey to examine, is of several miles in length and width, and it has been calculated that it contains gold to the value of 40 million sterling, recoverable by the ordinary hydraulic methods. These mines were partly worked by the Incas before the advent of the Spaniards, and then by the brother of Pizarro. Later on, under one of the viceroys, works were constructed which cost £500,000, consisting of canals, aqueducts, tunnels under the ridges, sluiceways, etc. At present these are much overgrown with vegetation, but the situation of the deposit, with ample water supply and good condition for the disposal of tailings, render it exceptionally favourable for working. The average value of the gravel, which was obtained by panning portions of the almost vertical faces of the huge

LAKE TITICACA, 12,370 FEET ABOVE SEA LEVEL.
RUSH-WOVEN CANOES AND CONICAL HOUSES OF THE INDIANS.

banks, which are cut down for five hundred or a thousand feet deep by ravines, is about two shillings and sixpence per ton of material.

On the eastern slope of the Peruvian Andes most of the rivers and streams are rich in alluvial gold, and the natives have a system of paving river-bars with stones in some places and recovering the gold annually brought down by the freshets. These are known as "gold farms." Whether upon the streams which flow into the great Madre de Rios River in the south of Peru, or whether those of the Marañon six hundred or seven hundred miles to the north, both of which systems I have visited, gold is recovered in considerable quantities by the Indians in the form of dust and nuggets, and used as a medium of exchange in the villages. In my examination of some of these placers I found the gold to be easily recoverable. I recollect one old Indian woman who lived in a hut on the top of a great bank of gravel, full of gold, who used sometimes to ask me, in her broken Spanish and Quechua, "Has the señor found much gold to-day?" If I replied in the negative, she said, "Never mind, I will get you some," and taking her pan, formed of a big gourd, such as the Indians use for gold-washing, she disappeared into some ravine, known to herself, and in the course of an hour or so came back to present me with gold dust, varying in weight up to half an ounce, which she had washed out. Indeed, at certain seasons of the year, the Indians—men and women—leave their planting of maize and potatoes, and go gold-washing in the streams.

The areas of land susceptible to gold recovery by means of dredging, are very much lower down towards the Amazon plain, where the rivers have lost much of their velocity, and the very fine gold has been deposited in the silt. There is no doubt that an enormous quantity of gold must exist in this form, the work of the elements for ages, and some attempts recently have been made to take in gold dredgers for recovering it. But this must be looked upon as extremely hazardous at present. A dredger is a heavy and complicated piece of machinery, and even when it has been conveyed from the Pacific coast up to the Andes and carried thereover and down into the montaña on mule-back and by Indians it

is likely to suffer from the lack of repairing facilities in such a region. Moreover, the streams are subject to very sudden floods due to the tropical rainfall, and the few dredges which, so far, have been taken in have suffered disaster from being carried on to the rocks by sudden floods. Perhaps the region is too inaccessible yet for the successful operation of these machines, although the engineer and explorer is loath to think so. As to "hydraulic" mining of the deposits of gold-bearing gravel, of which I have already spoken, the conditions are more favourable, and no machinery at all is required for their working; nothing but iron pipes and nozzles.

We now come to the matter of gold-quartz lodes. These are exceedingly numerous, and are found throughout the country. In order that an exact idea may be formed of the value of such mines, I will give figures of some of those which I have examined, and which may be taken to some extent as typical:—In the southern part of the country is a group of gold-quartz lodes existing under favourable conditions for working. The ten main lodes or veins cross a deep valley, ascending the slopes and traversing a plateau on both sides. The outcrop of these lodes is from two thousand to three thousand feet above the lowest adit level on the valley floor, and the lode extends downwards to unknown depths. The lodes are traceable and have old workings upon them for a length of twelve miles, so that the dimensions of depth and length show the existence of a vast quantity of ore. As to the widths of the lodes, they vary up to eight feet generally, enclosing strong ore-bodies of good pay ore, whose value, as shown by the yield of working extending over some years, may be taken at two ounces per ton, 70 per cent. of which is recoverable by amalgamation on the battery plates, and the balance by the usual methods from the pyrites with which it is associated. Thus the ore lends itself to relatively cheap mining by means of adit levels, whilst facilities both for water-power and for treatment are obtainable from the river, which flows near at hand. It is evidence of the backward state of mining in Peru that, notwithstanding that this good district is at a distance of only fifty or sixty miles from the coast, it has remained neglected. Here is an opportunity for capitalists.

Another district has strong lodes up to ten feet wide in places, whose ore values are one and a half ounces per ton. The ore is a smelting ore, carrying a high percentage of lead, and both water-power and coal are found close at hand. Yet another group of old mines contains twelve strong lodes, whose gold values range from two to seven ounces per ton, with high grades of silver, and these have been extensively worked at the surface, for miles in length, by native miners, who have extracted the ore from the upper or oxidized portion of the lodes, and have recovered the free gold by amalgamation in their primitive appliances. In other parts of Peru I have examined gold and silver lodes which carry pay ore in great bodies up to 150 feet in width, with external old workings, and these only require modern methods and appliances to yield up their wealth again. In yet another district is an almost inexhaustible area of gold-bearing conglomerate, averaging about three-quarters of an ounce to the ton. All that has been done in such countries as Mexico can be much more than duplicated in Peru, where Nature has disposed things in the Andes on a much more stupendous scale.

As to silver, the hills of Peru are, in certain regions, literally honeycombed with old workings upon rich lodes; and the Andes are dotted with ancient reduction works for recovering the white metal. From one district alone—Cerro de Pasco—silver was produced, from the end of the eighteenth to the end of the nineteenth centuries, to the value of forty million pounds; whilst the present output is somewhat under a million pounds. The present condition of many of these valuable Peruvian silver mines is that their workings are water-logged, and the native miner's resources do not generally permit them to spend money in long adit levels or pumping machinery for drainage. I have discovered and examined numerous mines of this nature—sometimes abandoned and without owners, open to any one who chose to lay claim to them—which contain great bodies of rich silver ore, and the cost of draining and working these would be comparatively small. Great fortunes have been made almost by the stroke of a pick in Peru in the past in these silver mines, and conditions are much the same to-day. Probably no country in the world offers such exceptional conditions for

those who are desirous of risking money in mining, and the expenditure of very large capital is not necessary. Generally speaking, all the elements of rich and abundant ore, proven lodes, water power, fuel, and cheap labour are to be found, and the only requisites are capital and management.

It is remarkable how the native miners, whether pre-historic, whether recently, have delved into the earth even in the most remote region of the Andes region. I have penetrated to remote Indian villages upon the upper Marañon, hundreds of miles away from the coast, and there, driven into the rocky ribs of some hidden cañon, or through the gravel banks of ancient river-beds, are tunnels, worked without the use of explosives—or, indeed, in some cases of ancient mines, without steel tools. An old Serrano, half Cholo, craved leave of my servant one evening to speak with me, as I sojourned in a village on the banks of the Marañon, and overhearing his importunities I lent ear to his mumbled Spanish, the burden of which was, “Mucho oro, mucho oro, señor”—“Gold, señor, much gold.” Near at hand, he said, was a mine where he had worked as a young man—he must have been nearly a hundred at the time I saw him—and which his father and his grandfather had worked before him; and from this mine, whose locality was known to no one but himself, they had extracted great quantities of gold. With this gold they had purchased lands and cattle and built adobe buildings, and one of them had even journeyed as far as that (to him) wondrous city of Lima, greater than which—he questioned me—surely there could be no other city in the world! Lima was about six days distant by mule-back and coast steamer, but I forebore to draw comparison with London, Paris, or New York with the eager old fellow. Well, the purpose of his visit to me—he had heard I was an “Ingles,” and the reputation of the “Ingles” (God grant we may ever deserve it) had penetrated even to the old man’s ears as something embodying fair-dealing and staunch dealing—was to impart this secret of the mine to me. He did not wish to die and leave it undisclosed, he said, and to inform his neighbours of it might only have led to some trickery on their part to possess themselves of it. All this he informed me in a low

voice, begging I would go on the morrow to examine the mine, and that if I found it valuable to take half for my share, work it, and give him half the proceeds for the rest of his life—a species of old age pension! Poor old fellow. I seem to hear his quavering accents now, though doubtless he is part of the dust near where the Marañon rolls by.

I consented to examine his mine, and to make a report upon it, and if it were of workable value to endeavour to induce capitalist friends to work it, with the assurance that his half should be respected; warning him, however, that the region was remote, and that it was extremely doubtful if capital would venture there. And on the morrow, having given him a paper to that effect with my signature thereto, I ordered an early move in the direction indicated by the old Serrano.

For two nights before my man had shown me, on the backs of the mules as they munched their alfalfa in the corral, blood spots and clots from lacerations on the neck. At first we did not know what it was, but the old miner happening to observe it soon informed them. “It is the *murcielagos*, the vampires from the mine,” he said, and further informed me how the old workings of his mine (as indeed I found to be the case) were full of blood-sucking bats.

The entrance to the mine might have escaped any but an experienced eye, but as we rounded a natural buttress of hard conglomerate I beheld what appeared to be a mound, overgrown with vegetation, upon the steep hillside sloping towards the Marañon; and, in effect, it was the “dump” beneath the entrance to the mine. Moreover, some rocks had been so disposed and the bushes had grown in such a way as cunningly to conceal the entrance, but with the aid of a machete the narrow opening was soon exposed to view. “No one has entered here for forty years,” said the old man, “much more than the lifetime of the señor, and it must be full of bats.”

Well might it have been so, and the interior of that infernal place I shall never forget. We entered with a torch and candles, but scarcely had we proceeded a hundred feet into the labyrinths which—the old man said—extended far into

the hill, when I heard a rushing sound, and numbers of bats, disturbed by the lights, flew along the passage, flapping their damp and clammy membrane-wings in my face and dashing out the lights. We beat a hasty retreat, for the stream of bats grew so strong as positively to dispute passage with us. "We must get boughs of trees and hold them in front of us," said the old miner. However, desirous of making the road easier for me, he entered with one of my men, with the object of penetrating inwards to a large excavated chamber which he said existed inside, there to make a great smoke and fire with dried grass, which would soon drive out the vampires. I waited a brief space, perched on that steep hillside sitting upon a block of stone, whilst my eyes wandered down to the Marañon in its gorge below and up to the great white sandstone capping of the escarpments of its V-shaped valley, thousands of feet above, on the opposite side. My attention was soon drawn again to the gaping mine-mouth, however, for streams of bats poured out, the result of the old man's fire; and after a space we entered also. A labyrinth of passages and chambers opened before the glimmering light of my candle as I passed onwards, and—

"Innumerable corridors far withdrawn,
Where the rat memory doth his burrows make."

thought I, as I threaded the old passages. After passing some five hundred feet or more of low irregular adit, we reached the chamber, a great subterranean hollowing out of the conglomerate, where a large body of rich ore had been removed. I looked up to the roof of the chamber: what did I see? A seething, horrible mass of vampires hanging from it, in bunches covering the roof, and I could not repress a shudder. The floor, too, was ankle-deep in filth, composed of their droppings and of the blood of animals which the vampires had sucked, a horrible mire which gave a sickening odour as I trod in it. Here, then, were the bats which had sucked the blood of the mules: this was their stronghold. But the old miner was unmoved; "Mucho oro, señor," he said—"much gold," and pointed to the adits which went from the cavern, black gaping holes as indicated by the light of our candles and the flicker of

the heap of burning grass which had been kindled. This is no romance, kind reader, this Dantesque chamber of the bats, and if you desire to go there I can give you exact particulars of its situation.

As regards copper, Peru may be expected to prove an important source of this metal when railways are extended into the regions where it occurs. The possibilities of Peruvian copper are being shown by the Cerro de Pasco deposits in the central part of the country, to work which the American company has spent, it is stated, some fourteen million dollars. A line of railway, eighty miles long, and smelting furnaces of large capacity have been constructed, and are in operation; and the district has been pronounced by British and American experts to be the largest copper-ore deposits in the world. There are other copper-bearing districts, only of secondary importance, more remote, however, from lines of railway; for it is a peculiarity of Peru that no copper deposits of value are found near the coast.

Coal abounds throughout Peru. I have examined numerous strong seams of anthracite standing vertically, in some cases, with exposed outcrops, and crowning the hills for miles. As a rule, these have remained unworked, owing to difficulties of transport, but they form a valuable asset for the future. In one region exist hundreds of millions of tons of coal exposed at the surface. Short lines of railway from the coast are necessary to work these deposits. There are, in addition, important deposits of coal upon the coast, which have only been discovered the past few years, both in the northern and in the southern part of the country; in some cases extending under the sea.

There are various deposits of quicksilver ores, and innumerable lead, zinc and other lodes and veins. The famous quicksilver mines of Peru yielded up a great revenue in past centuries to the Crown of Spain, and were pronounced by one of the viceroys as "one of the finest jewels of the Spanish Crown." I examined these important mines and consider their possibilities are very great. They might supply the world's market almost. In the northern part of Peru, near Tumbes, the petroleum wells are of considerable value; they

are worked principally by British firms, and the output finds a market in the country itself.

Leaving the high regions of the Andes we descend to the third natural zone of Peru, the "Montaña," or region of the forests of the Amazon plain. The natural resources of this vast region might be summed up by saying that it forms one of the world's great natural storehouses for the future. It is traversed by navigable streams and rivers in great part; all affluents of the Amazon. Of these waters ten thousand miles are navigable at all seasons of the year for steamers of varying draught; whilst in the wet season the total available length of navigable waters in rivers and streams, for steamers, launches and canoes exceeds twenty thousand miles in Peruvian territory.

The main product of this wild region at present is rubber, of which the output is valued at about one and a quarter millions sterling per annum. In the Peruvian montaña there are very extensive rubber-bearing forests, both in that part of the Amazon plain drained by the affluents of the Madre de Dios river, and, although less known, the region to the north drained by the Marañon and Huallaga. The principal Peruvian rubber-bearing trees are the shiringa, or hevea, and the caucho. The hevea is the superior kind, and is that which has made Brazil famous as a rubber-producer. The tree requires a rich, deep soil and abundant moisture, and at times grows to great size. It lends itself to cultivation, although not much has been done in Peru yet in rubber-planting. Large areas of rubber-bearing land have been taken up in Peru, principally by Peruvians and partly by foreign companies, but much land still remains unoccupied, which might occupy the attention of capitalists.

Chocolate, sugar, cotton, cocaine, quinine, and a great variety of tropical fruits are also produced. The possibilities for producing chocolate are very great. This region is one of the most fertile in the world; almost anything can be produced under cultivation; and instead of being the home, principally, of roving savages and monkeys it might be the centre of a great civilization. As to the climate, this in the higher region is healthy and pleasant. In the hot valleys of the lower region malaria is encountered, and this is the

ABORIGINES OF THE FORESTS OF THE PERUVIAN AMAZON TRIBUTARIES.

greatest scourge always, before drainage and ventilation are carried out. The principal drawback to the business of rubber-collecting is the lack of labour, for, as regards transport, the waterways of the Amazon system afford means of outlet to Iquitos and thence to Europe or the United States down the Amazon. The river port of Iquitos is destined to become of great importance, it cannot be doubted. It is the commercial centre for the whole of this vast north-eastern region of the Peruvian montaña, and notwithstanding that it is 2,500 miles up the river, it is reached by the Liverpool steamers of the Booth Line of three thousand tons burden. The Amazon at Iquitos is three-quarters of a mile wide. One-tenth of the whole foreign trade of Peru is done with Iquitos, the main article of export being the rubber.

This vast territory of the Peruvian montaña is one which any nation might be proud to possess, but it is time it should be opened up to civilization, and its natural resources turned to wealth. For this purpose railways are needed, and the construction of some is projected. Among the most important projects of this nature is one to unite the headwaters of the Peruvian Amazon, or Marañon, with the Pacific coast port of Payta, upon which I have been occupied for some time. The line has remarkable characteristics and possibilities. It will be only four hundred miles long, yet it will create a new transcontinental route of trade and travel between the Atlantic and the Pacific seaboard—a route of which the three thousand miles of the Amazon, navigable for steamships, forms the natural highway. The line will cross the Andes at the low elevation of 6,600 feet above sea-level—the only low gap existing in the many thousands of miles of snow-bound Cordillera, which extend throughout Ecuador, Peru, and Chile. The important geographical conditions and the possibilities of the route across South America in its widest portion have never been brought forward before, and the fact that steam navigation from Europe can be carried on upon the Amazon, to within 260 miles of the Pacific Coast, is not generally grasped.

One evening I took my seat upon a tongue of land which marked the confluence of two small rivers of the Peruvian "Montaña"; part of the system of streams which fall into

the great Madre de Dios River, a tributary of the mighty Amazon of Brazil. The tongue of land was formed of silurian slates and masses of gleaming iron pyrites and veins of white quartz, all laid bare and polished by the overflowing of the waters in times of flood, waters whose now chastened flow slid gently by me, for it was the "dry" season, or time of least rainfall. A cloud of yellow butterflies flew around, many of them alighting on the rock and upon my clothes and hat; whilst an occasional *taverna*—a species of bee of that region which keeps buzzing around you like a wearisome conversationalist, and will not be stilled, droned its parting good-bye. Tangled masses of brushwood and forest, which safe to say had never been penetrated by the foot of the white man, arose upon the margins of the stream, growing upon enormous banks of auriferous soil and gravel—the upheaval bed of some river or lake of earlier epochs. I was tired, for I had just scrambled down a precipice 2,500 feet high, or at any rate my aneroid showed it to be about that—comfortably tired and basking in the warmth of the sun, which was now going down. A little higher up the tongue of land my Cholos were busy over the camp-fire, cooking the evening meal; and they had prepared my bed under a cedar tree upon a snug ledge of rock, with soft aromatic boughs beneath the blanket, and a piece of Silurian slate (covered with a blanket) for a pillow. Have you ever slept with a piece of Silurian slate for a pillow, kind reader? No doubt the question will remind you of the incident in which some one playfully "caught the professor in the abdomen with a chunk of Old Red Sandstone." But I can assure you that there is much of charm in such close converse with Nature; much of pleasure in contemplating these great uninhabited regions of the Americas.

My reflections turned to the benefit which man might enjoy from the cultivation of these great regions of the Upper Amazon. Nothing has ever obsessed me so greatly as the observation of Nature's unused resources together with the recollection of the starving poor and the unemployed of the world's great civilized cities—London, New York, Paris, Chicago—all of whose mean streets and hopeless poor I have seen. Great Spirit of Providence, when will nations awake

to some wise organization of their people and the use of Nature's boundless gifts? When shall the curse of sheer commercialism, of action and enterprise only for private gain, be lifted? Here alone is a region where an empire of contented people might dwell, inhabited by wild beasts alone. But pardon this digression, kind reader.

The natural resources of Peru are varied and abundant, and in many branches of industrial activity British capital can be profitably employed. At present British commerce with Peru greatly exceeds that of any other nation, and British interests control the principal railways of the country, whilst, as before stated, there is a good deal of British capital invested in sugar and cotton production. American and German activity and enterprise are, however, growing rapidly. In mining, British enterprise is not favourably marked so far. Some of the mining enterprises of British origin have not done well, but the fault has been in mismanagement rather than in the mines themselves. Indeed, in some cases, these have been established under questionable native and foreign auspices, and have suffered in consequence, such as the gold mines near Chimbote; the Recuay copper mines, and others. However, there can be no doubt that when the present lack of mining enterprise in London passes, attention will be turned to Peru and its stores of gold, silver, copper, and coal; and capital drawn to investment there.

Directly affecting the resources of a country such as Peru, is the character of its inhabitants. The Peruvians, as a whole, are a hospitable and well-meaning people, with a cultured upper class. Since the loss of their nitrate wealth, they have shown some disposition towards taking off their coats, and going to work to develop their country, and, indeed, the great territory of Peru's mountain and forest region is of far greater value than the nitrate wealth of Tarapaca, whose life can be measured now by decades. The Peruvian upper class is a Spanish-speaking white and mixed race, but fond of ease; and the women are attractive and vivacious. Lima has always been a centre of Spanish-American civilization and culture inherited from the time of the viceroys. In their business methods the Peruvians as

individuals have yet a good deal to learn, their greatest failing being the lack of rigid observance of word and bond; but they are a young nation with their future before them. More workers are the country's principal need, and more ideas from the outside. The small population of three million souls—of which 50 per cent. are Cholos and Indians—inhabiting an area of seven hundred thousand square miles, scarcely increases, and immigration at present is nil, notwithstanding the possibilities for immigrants. Remote from Europe, Peru is one of those countries which may be expected to benefit by the Panama Canal, whenever that great work may be completed. The political and financial conditions of the country are good at present; the budget yields a surplus, and the best governing elements of the country are controlling the affairs of State, with the result that no serious revolution has occurred for fourteen years.

I have said that the Peruvians' business methods are susceptible of improvement, and this will be strongly impressed upon the foreigner. A Peruvian too often enters into a contract with some mental reservation; he has largely developed that Spanish trait which willingly makes excellent laws, whilst reserving the right to break them individually! On several occasions I have entered into agreements with Peruvians, mainly upon the subject of mines, and have incurred much expense in time and money to carry out my part, only to find that by tricks and bombastic methods the other party has escaped from his obligations in order to enjoy the whole profit of the negotiations for himself! The Peruvian in some cases have inherited or acquired a singular Jesuitical character. Courteous and hospitable in social life, in business the spirit of fair-dealing becomes one of expediency. At present as a nation they are somewhat pusillanimous; yet the striving to remedy their defects is slow, both as individuals and as a nation. The terrible defeat and punishment they received from the Chileans in the bloody "War of the Pacific" in 1880 was such as the country has not entirely recovered from; yet the quarrel over Tacna and Arica has not yet been settled, and new affronts have recently been exchanged between Chile and Peru, resulting in the withdrawal of ministers and consuls, and almost in the menace

PART OF THE CITY OF LIMA A BIRD'S-EYE VIEW.

of further war. Whilst the student of these matters cannot refrain from sympathizing with the Peruvians on the bitter losses and sacrifices which she incurred, and the injustice which was dealt out to her, the calamity was partly the result of the Peruvian character, which, arrogant, yet pusillanimous, fails to absorb the philosophy which time and circumstance ought to bring to every nation and every individual. Political unrest is much less serious than formerly, but it still breaks out at times, and in July 1909 my friend in Lima, the Peruvian attorney-general, wrote me that the person of the President had just been seized by a body of revolutionaries, clapped into prison, but rescued two hours afterwards by the army, which had remained loyal; my friend's letter was edged with black: his brother, who had been passing along the street, having been shot down by accident in a fusillade!

Yet there is much of attraction in the capitals and towns of Peru, and much that is pleasing in Peruvian civilization. As regards the history of the Church and the viceroys, and the architecture of the cities, the plazas, the cathedrals, the public institutions, and the domestic life of the people, we have similar conditions such as obtain in Mexico. Lima—the “City of the Kings,” as Pizarro named it—was, and indeed is, a centre of Spanish-American civilization, and remains a stronghold of Roman Catholicism, for the cult of other religions is still illegal though tolerated. The other cities of Peru, such as Trujillo, Arequipa, and the numerous state capitals—generally situated at high elevations in the Andine regions, and more or less remote from the coast, have each their distinctive life, charged strongly with the colour of the bygone Inca *régime*, and the presence of the population of the Quechua Indians.

The good climate which Lima enjoys—it is perhaps too equable for the rigorous northerner—together with its easy access to pretty suburban watering-places on the coast, render it an attractive city to live in; and the foreigner encounters a cultured upper class of people, fond of art, literature and science. There are some buildings of historic importance, and the general aspect of the streets and characteristic Hispanic architecture—chapters in stone from mediæval

Spain—are restful and pleasing. Strange that these old-world places, with their dreamy air, where sweet oval faces and dark eyes look forth from balconies, and the sound of the Angelus is heard, should, on sudden occasion, be the scene of firing and bloodshed, as this or that attack of revolutionary fever comes to its crisis! With all their faults, such cities as Lima, and its people, remain pleasingly upon the traveller's mind; and Heaven forbid that they should ever be metamorphosed into the type of blatant manufacturing community of Anglo-America, where the factory chimney and the golden calf are the most conspicuous objects!

Lima is progressing, as regards its public buildings, somewhat, or at least as to its hotels. I recollect during one of my first visits there—it was only five years ago—one of the principal hotels of the city did not contain a bath! I arrived one evening weary and dusty, having come down from weeks of mule-back journeying in the interior, and seeking the hotel-office requested to have a hot bath. The hotel was administered by some French ladies, and it was with some diffidence that I broached the subject, which seemed to cause the manageress some perplexity; for she called another of the ladies and entered into consultation with her. "You would like a hot bath?" the other lady said; to which I replied that if it were not inconvenient I should like one very much. She turned again to her colleague, and after a moment they sent for the third lady, and all three discussed the matter. This was rather embarrassing. However, after a space they turned to me with the assurance that the bath was quite possible, and that it would be ready in half-an-hour. So I went up to my rooms to wait, somewhat impatiently, for I was in a hurry to dress for dinner at H.B.M.'s minister's house—in accordance with his invitation to a "Bridge Party" (I had accepted with the proviso that I did not play bridge, however!). My rooms in the hotel were number thirty-three; I recollect the fact because the attendant who unlocked the door said, "Numero treinta y tres, señor, the same as the age of Jesucristo!"—an allusion which, I confess, caused me a momentary shock at what, however, was not meant for levity on his part.

Can you imagine, good reader, how that bath was filled?

I was duly called and conducted to a dark cupboard under some stair, containing, it is true, an ancient-looking bath; and simultaneously a number of kitchen-maids and one or two small boys from the lower (hotel) regions arrived, each bearing a utensil—saucepan or kettle—of hot water, which they emptied into the bath, going and coming until there was at least six inches of water in it, whilst the lady-proprietress stood by directing the operations!

Now, however, Lima has a new first-class hotel, where the traveller may obtain almost anything in the way of food or convenience which he might enjoy in London or Paris. The view from the old hotel was interesting, whatever the failings of the hostelry; and my room faced the plaza and the ancient massive cathedral, whose foundation-stone was laid by Pizarro. Earthquake shocks, so far, have left it unimpaired, save for a few cracks and—during my visit—the shifting of some of the stone figures of saints upon the parapet. One day a continued clashing of the cathedral bells woke me from a siesta; a jangling and banging which, as the bell tower was only a biscuit's toss away from my window, sounded deafening. What was the reason of it, I inquired; and came the answer in solemn tones from the attendant—the same who had shown me number thirty-three—"The Pope has died, señor." It was so, and the bells were "doblando" for the passing hence of his Holiness.

Life in the remote interior towns of the Peruvian Andes has its own peculiar colour. To some it would appear doubtless monotonous, triste, and almost hopeless. To the more thoughtful traveller, however, it is an interesting "study in grey" which contains some subtle charm which, kind reader, shall not escape our universalist eye and evolutionist judgment. Behold a great unkempt plaza, surrounded by the usual Spanish-American buildings; the cathedral or church, the municipal offices, the club (if any) and the houses of the most wealthy of the community with grille-covered windows and balconies, and wide entrance doorway opening on to the interior patio; that class of house-architecture which Spain has stamped upon half a world. Let us take our stand in this great square at early morning. The delicious cool air

from the mountains is a veritable tonic—we must recollect that we are ten or eleven thousand feet above sea-level here—and upon the near horizon arise such glorious snow-capped peaks, rising perhaps to twenty thousand feet above sea-level—peaks never heard of by the Switzerland-trotting tourist, hanging against the blue-grey sky in distant and inaccessible purity, luring us, like a cold and inaccessible virgin, to gaze regretfully upon them. Yet I should not necessarily say inaccessible, for I have ascended some of these snowy slopes where man never trod before. “The inhabitants of this town ought to be chaste and elevated,” I wrote in an article which the editor of the little local Peruvian paper had begged me to contribute soon after my arrival in one of these interior towns. But unfortunately the environment of these people often seem to disprove the theory that surroundings exercise influence on mankind, for the people of the Peruvian sierra, whilst like all communities, they are a compound of good and bad, have some qualities which are exceedingly trying to those who do business with them, and the serious frauds which I have suffered myself have had the effect of causing me to see things through the spectacles of actuality and not of illusion, which is useful, if disagreeable.

These interior towns, of which the plaza is the centre, generally stand upon some broad *campiña*, or cultivated valley or plain, surrounded on all sides by an amphitheatre of mountains. Far away upon the slopes is a faint, white line, the mule-trail which I toilsomely descended on my way hither; the only means of communication for this population of, say, ten thousand souls, with the outside world; a steep and ill-formed road which zig-zags over those eternal rocks, scarcely improved for traffic since the first Indian took his way there after the Andes were upraised from chaos. An Anglo-American city would have built a railway, or at least a road for vehicles, half a century ago, but the Hispanic people love not such engineering efforts, and, moreover, they are poor. It is still early, six o'clock, say, and since dark the Indian women and men, red-blanketed and white-hatted, with bare feet, or possibly with sandals if their resources permit the expense of footgear, have been sitting on the cathedral terraces with burro-loads of fodder, great mountains

THE CITIES OF THE PERUVIAN ANDES . HUARAZ, 10,000 FEET ABOVE SEA-LEVEL

of green alfalfa for sale, principally for the horses of the battalion of cavalry, which is quartered in the place.

These picturesque Cholos and Indians, men and women, come in in their thousands from the surrounding country to buy, sell, drink, receive benedictions from the *cura*, and form a community of great interest and colour to the observer. As explained elsewhere, the Indians are the Quechuas, the same people who constituted the population of the country under the Incas; as also the Aymaras, in certain parts of the country and of Bolivia. The Cholos are these same Indian stock with some small strain of Spanish blood, not enough to warrant being called *Mestizos*, however, for these latter are of pronounced semi-Spanish type, and form the bulk of the civilized part of the population. Of excellent national material for population and workers are these Cholos and Cholo-Indians, and indeed they are the only people who can ever carry on manual labour of mining and agriculture in the rarefied air of these high plateaux. The Chinaman and the negro—Heaven be praised!—can never take their place, for nature has set the barrier of altitude to their environment, preserving the soil for the use of the people who have done her the simple homage of being born there! The women are exceedingly prolific in child-bearing, and were not the infant mortality so terribly heavy, due to their poverty and the insanitary conditions in which they live, the population of the Peruvian sierra would increase instead of remaining stationary, as it appears to be doing. You will never see a native woman of these regions without a baby at her back, slung in a shawl, and one or two at her side. Nor shall I ever forget a spectacle I saw in this same plaza where we are standing, good reader, at the moment. Bear with me whilst I recount it.

An order had been received for the battalion of soldiery to leave the place for some other district, and they drew up in the great square in marching order. What was that faint but continuous sound of mourning and weeping which came from among the mass of Cholas and Indians congregated on the cathedral terrace to watch the soldiers' departure? It was the sound of women weeping, women who "would not be comforted," weeping, however, not for

their children, but for their departing "husbands": the temporary husbands of two years' partnership. For the *militares* are going, and the poor women who have lived with them, cooked for them, rendered them every duty which primitive woman may render, are to be left abandoned now; and not only they but the one or two children each which they have borne to the soldiers! The prefect is standing by me (the prefect, I must explain, in Peru, is equivalent to the state governor, the highest civil position) and is taking in the scene with characteristic comments. "Tanta Chola llorando"—"such a lot of Indian-weeping"—he exclaims to me; adding, "You see, the soldiers have been here nearly two years; time for nearly two children apiece," and he digs me in the ribs facetiously. "Why don't they take the women with them?" I reply; "it seems heartless to leave them." He says the official order is that no women are to accompany the troop. And how could they, indeed? Five days of toilsome march over mountain and desert intervene between us and the coast, where the battalion is to take steamer for the capital. Could these poor creatures and their tender progeny struggle in the soldiers' wake? They would die on the road. "What will you do with them?" I ask the prefect, and that worthy shrugs his shoulders. After a minute or so he says, "There will be another troop here before long, and the women will be busy again!"

And now from out of the great doorway on the plaza of the soldiers' head-quarters, heralded by a trumpet-call, comes the colonel and his officers, and the troop of cavalry lines up in marching order to depart. Indian women, with babies at their breasts, rendered bold by the menace of abandoned motherhood, press in among the horses' legs to seek, for a last good-bye or last protest, the author of the baby's being. They are rudely repulsed and thrust away by order of the officers. The prefect is looking on unmoved—it is no new scene to him, nor to the other residents of the place standing around. Personally, I turn aside; for the life of me I cannot restrain a moment's emotion. Then the bugle sounds again; the troop enfilades around the plaza with a great clattering of hoofs, which drowns the sound of weeping; it takes its way towards the dusty trail leading to the world beyond;

a brief space and the clatter and dust of its departure has died away in the distance. "Vamos," says the prefect, turning to me and his other companions, "let us go and have a *copita*," and we pass through the crowd of sobbing Cholas, comforting each other, as the poor always do.

Not only the women have suffered by the troops' departure. The shopkeepers are loud in their complaints of unpaid officers' bills; the hotel-keeper says he is ruined, as he has boarded and fed several captains and lieutenants who have drunk his wines and eaten his dinners without paying. But when he approached the colonel, that worthy replied with the Spanish equivalent of seeking his payment with his satanic majesty, as he had something else to do besides bothering about his officers' bills. However, a round-robin was drawn up by the shopkeepers and innkeepers—they showed it to me—and sent to Lima, the seat of the "Supreme Government," and I believe a percentage of the claims was recovered afterwards. I am reminded of "Don Cæsar de Bazan" and his "unpaid tailor's bill"—

"All the world over; all the world over,
To love, to drink, to fight I delight."

My first meeting with the prefect had been somewhat singular. On arriving in the place I had brought letters of introduction to some of the principal people—who had given a dinner in my honour—but not to him. Walking in the plaza one morning I met a middle-aged individual of marked Mestizo strain, soldierly-looking but dressed in mufti, who to my surprise, as I did not know him, addressed me, inviting me to take a *copita*—that inevitable Spanish-American invitation. "Ah," he said, in Spanish, of course, "you Englishmen are always surprised if a stranger speaks to you, but never mind, I am the prefect." So it was that we became acquainted, and I must explain the advent of an English engineer and explorer in those remote communities is a matter of much interest to the inhabitants. The prefect never afterwards failed to rally me on British reserve, and he often used to range himself at my side at "church parade" on Sunday, that is to say at the time when the ladies, young and old, emerge from the temple at the conclusion of mass.

This is a species of review indulged in severally by the male part of the community, who love to catch a glance from bright eyes shot coyly or meaningly from beneath the mantilla. As for the prefect, he knew the glances would be more frequent in the neighbourhood of the young foreigner!

I forgot to say, concerning the departure of the battalion, that the colonel, at least, had not left his temporary partner behind, for a special convoy was told off to take the lady to the coast, and the fact that she was a married woman did not seem to weigh greatly in the balance! I am not giving these details of Andine life, good reader, from the desire of serving-up *chronique scandaleuse*, but simply to show its character in these communities; and it is easily gathered that the relations between the sexes are much looser than in European communities. The Spanish-American man does not regard woman with the same respect that the Anglo-American or the Briton shows towards her. The Spaniards of conquistadorial and viceregal days ran riot among the unprotesting native women, as was indeed scarcely more than natural, and the same spirit remains to-day. The "unprotected female" of these communities need, indeed, have a care of herself—

"The maid too heedless straying,
As one we (Pedro's daughter) know,
Home returns full sad and slow;
What can have made her so?"

It is said sometimes that the Indian women do not like the foreigner, but I must say I have found women, even among the Cholas and Indians of Peru, more amenable to friendship and hospitality than men. I have, as a traveller and speaking in general terms, always laid it down as an axiom that wherever I saw a petticoat there I was sure of a welcome. I have found this axiom to hold good in Canada, California, Mexico, Peru and Chile—a sufficiently wide range of territory! Camping upon a remote plateau in the Andine highlands I wandered one day up the valley whilst my men prepared the evening meal, and suddenly ran into a small hamlet of natives. They did not seem at all perturbed by the advent of an Englishman in riding-dress among them, although probably they had never, or rarely, beheld a

foreigner—and “foreigners” include the upper class of their own country—before. I leant over the fence which surrounded a kind of corral of one of the houses, where a group of women were cooking in earthen pots, and addressed them in Spanish. To this they replied, as is customary among them, in their native Quechua. Indeed, it was probable that they did not understand Spanish, for when I said something complimentary to one of the pretty Indian girls she replied with a smile and a look at her companion and immediately handed out to me an earthenware bowl full of cooked *frijoles* or beans, from the pot. Being both hungry and not desirous of slighting them, I devoured the beans and thanked her, remarking that I thought her very hospitable. Her reply to this was a bowlful of cooked maize, part of which I attacked, and when at last I said good-bye, thanking them in Spanish for their hospitality and otherwise complimenting them, out came a pot of potatoes, which I was obliged to decline! However, I sent them from my camp a present of a tin of sardines and some Manila cigarettes. Not in a frivolous spirit do I record this.

One of the dominating factors in Peruvian life is the *cura* and the Church. The priest in Spanish-America may be considered a man of privileged calling. That is to say, that being a priest his welfare and happiness are secured for life. He may not feed his flock, but his flock will always feed *him*: men will bring him tithes, women will yield themselves up to his service and requirements, of whatever nature! In a remote part of the Andes a serrano at whose house I was lodging recited me the following recipe for happiness—

“Un dia feliz—afeitese ;
 Una semana feliz—matas un puerco ;
 Un año feliz—cásate ;
 Una vida feliz—hazte cura !”

which I may translate as—

“For a happy day—have a shave ;
 For a happy week—kill a pig ;
 For a happy year—marry ;
 For a happy life—*be a priest!*”

To fully appreciate this it must be recollected that in such regions shaving is generally performed on high-days and

holidays; the killing of a pig is an event of some importance, and provides—especially among the Spanish peoples—matters of much and lasting satisfaction for the table; marrying is an occasion for great rejoicing and even licence, whilst the reference to holy orders sets forth the *sumum bonum* of existence!

But the cura does not always work his will. In one remote village of the Andes where I stayed for a few days the *gobernador*—the petty authority of the place—in showing me the “sights” took me to a rude bridge over the stream. “This bridge,” he said, “has a history. Ten years ago several of the people took the cura and hanged him from the balustrade.” The cause of this very rare example of a popular execution (for lynch law is practically unknown in Spanish-America) was, I learned, due to the wrongful behaviour of the cura with the wife of one of the citizens of the place. The priests of the Andine countries, and indeed of Spanish-America generally, have a reputation for immorality which it is impossible to controvert. Celibacy (except in the rarest cases) is unknown among them. It would be too much for the foreigner to judge or condemn them entirely on this score, and personally I prefer to recollect the many instances of hospitality they have shown me. I have often arrived with my men at a place where I knew absolutely no one, and have at once been received in the house of the village cura.

Evening falls upon the plaza of our Andine town. It is six o'clock, and the sun is setting. There is no sunset gun, but listen to the notes of the bugle, for the guard has turned out from the guard-house into the plaza in front of the municipal palace to salute the flag, as it is the moment of its lowering. Out rushes the prefect as the notes of the music reach him, and he stands bareheaded regarding the flagstaff and the banner of Peru which floats above the parapet. Hats off all! the notes of the national anthem ring out and are echoed among the hills; a chorus of mongrel dogs, which have collected near the soldiery in the plaza, gives mournful tongue in accompaniment to the bugler; the sun goes down behind the hills and a chill breeze arises. Down flutters the flag on its halyards—the day is done.

As before stated, in journeying from one part of Peru to another it is inevitable to cross the Andes, one or several of the paralleling cordilleras, at high elevation: the passes in some cases reaching sixteen and seventeen thousand feet above sea-level. The rarefied air and the constant storms encountered upon these high summits are very trying, although the grandeur of the environment at times compensates for the difficulties and even sufferings of the trail. I have crossed the Andine summits many times (once on foot over the snow-cap, where passage had never been made before by a white man), and have experienced all the forces of nature, in rain, snow, hail, wind and cold, which it would be possible to concentrate upon one spot!

Having completed my work in the region of the Marañon, I prepared to return to the coast. I had explored a snowy pass over the main range of the Andes at the request of the authorities of one of the departments of that part of Peru, and proposed to return by crossing the cordillera over the high pass which forms the principal means of communication there. The gobernador—the petty official of the Indian village at whose house I had stayed—was very anxious to oblige his guest in the matter of obtaining horses, notwithstanding his regret, as he put it, at losing “a distinguished traveller from the outside world, who had rendered such a service to the region,” for my exploration had opened up the possibility of a long-desired mule-road over the summit, but which had never been attempted “until,” as the *alcalde* of the village, another petty official, said, “the way had been shown by a son of energetic Albion.” Horses were what I wanted now, and both officials undertook to obtain them.

But it is one thing to promise and another to obtain horses and mules in the Peruvian sierra villages. Not that they do not exist, but their Mestizo, or Indian, owners are loath to hire—their beasts have too often been commandeered, never to be seen again! Within two days, however, four sorry brutes—one less sorry than the others, and destined for myself—were brought in by the strenuous commands of the authorities. “Now, señor,” those worthies, the gobernador and the *alcalde*, said, “you will be able to make a start early to-morrow.” But I think I must have shown

no particular signs of enthusiasm during my inspection of the decrepit brutes. Long experience in Spanish-America had rendered me cautious. "Tell me, gobernador," I said, perhaps with a note of sarcasm, "do you really think these animals will cross the cordillera?" He replied in such a way as confirmed my own doubts, but we agreed that a good day's feeding with plentiful *alfalfa* might render it possible.

In these high regions of Peru the diet of horses is often got down to an irreducible minimum; alfalfa or other fodder is scarce, and above a certain elevation, indeed, does not grow at all; whilst the unenterprising native often stints his beast from parsimony or laziness. The horse is not a native of the New World, and in many regions he has been introduced there to suffer! These particular animals, however, were not destined to take me upon my journey, for on going outside early next morning I found the gobernador thrashing the *cholo* who had had charge of them. "He slept, the rascal," the gobernador explained as I interposed, "and the animals have been taken away in the night!" This did not surprise me—it was not a new experience of these forced loans of animals made by order of the authorities. Nor did I consider the loss irremediable, and I said so; and the gobernador promised other beasts for the "Mañana." "In any case, señor," he said, "it is better to wait a day or so," indicating the distant cordillera. I cast my eyes towards the beautiful snow-covered Andes, over whose summit I had so direfully struggled but a short time before in my exploration, and notwithstanding the rosy tinge of the rising sun upon the gleaming ice-bound peaks it was evident that a severe snowstorm was raging there. However, on the following day two horses and two mules were obtained and liberally treated to alfalfa, and guarded at night with the utmost vigilance—for, to tell the truth, it was another forced loan. The steed destined for myself was large but decrepit, with the usual frightful mass of sores on his back, caused by bad saddles and poverty of blood due to ill-nourishment. The animals for my three Peruvian assistants, who had accompanied me, were of varying—very varying—characteristics, ranging from a wicked-looking black mule to a small beast which no doubt was of equine race, but which looked

more like a rat than a horse! I did, in fact, christen it "El Raton," on the spot, much to the gobernador's amusement; and I reserved the wicked-looking mule for myself; it had stamina, at any rate.

We started, but late, due to the difficulties of obtaining saddles for my assistants; for as to my own I never went anywhere without it, a habit the result of long and bitter experience. It was imprudent to start so late, for to cross the cordillera the wise traveller sets out at daybreak, as after the sun passes the meridian the storms are generally let loose in the Andes. On the other hand I preferred not to risk the loss of the horses by remaining another night, so, having partaken of a last *copita* with the gobernador and his wife and daughter, and thanked them for their hospitality and distributed some largesse among his Indian dependents, I gave the order, and we were soon clear of the village, with its rows of thatched adobe huts, and ascending the foothills among the ruins of the early occupiers of the land—the *Gentiles*, as the Peruvians of to-day term the by-gone people. Indeed, it is very evident to the traveller that those people did live as clans or *Gentiles*, with clusters of ruined dwellings and castles in their midst upon inaccessible hill slopes.

The impressions of that journey, kind reader, will, I think, remain with me until I make the final departure over this earthly range. My own mule breasted the cordillera gallantly, but the animals ridden by my assistants lagged woefully behind; and night, I saw, would soon be upon us, with its storms and darkness. Far ahead of my companions I reined up my mule on a high, rocky counterfort to wait for them. Away to the east the shadow of the Andes was creeping across the country, and range after range of hills, intersected by profound valleys, stretched away towards the horizon, terminating in the limitless forests of the Amazon region which stretch for thousands of miles beyond the *Marañon*. In the opposite direction arose the slopes of the Andes, their summits, crowned with perpetual snow, rising in culminating points of ethereal-looking peaks, bathed by the passing roseate flush of the setting sun. Silent, solitary, majestic, they rose above me; and as I gazed upon them and

to that far horizon I felt for a space no care for the morrow, and something of that feeling of communion with nature which the traveller experiences at times in certain situations, came upon me. Half-an-hour I stood there halting, watching.

But there was nothing ethereal about the cold snow- and rain-storm which presently wound with sudden fury from among those everlasting snow-crowned aisles and turrets: whose sudden burst brought down a part of the snow-cornice of a white façade rising a thousand feet above me, when, my companions having rejoined me, we breasted the appalling steeps which formed the "road" among this Andine architecture. It was late, time for food; and under the lee of a rock we partook of the lunch which the gobernador had put up for us, which unfortunately proved to be neither appetizing nor abundant. However, he had privately put in my own *alforjas*, or saddle-bags, an excellent boiled ham, advising me to reserve it for my own use; but I cut off large chunks for the Peruvians and myself, returning the bone, with a remaining crust of bread, to the saddle-bags. In the snowy Andes, upon a night ride, even a ham-bone might be useful!

"What time shall we arrive?" (our destination was a town on the further side of the cordillera) I asked my man, who knew the road; and "Quien sabe, señor," was his reply, as he looked at the wretched horses. For hours we wound and zig-zagged up the slopes. Unceasingly the rain and snow beat upon us, blotting out the darkening landscape, rendering the trail invisible, and soaking my companions to the skin, for they were unprotected by indiarubber capes. Indeed, I did not fare much better myself, for the wind and rain blew up from underneath us, rather than from above: although the boa of vicuña fur which I used for such expeditions, wound round my neck and face, kept off the benumbing cold and prevented the wretched *soroche*, or headache and sickness, which sometimes attacks the traveller in these inclement regions, due to the rarefied air. Hour after hour, league after league, we plodded on in silence, feeling our way more by the sagacity of our horses than by our own eyesight, for night had fallen now and there was but the faintest gleam from the snow-cap upon which we had entered.

I was in the antarctic regions, only ten degrees south of the equator! Wet, benumbed, cramped, hungry—it was the retreat from Moscow; Hannibal and the Alps, or the march of Boliva or San Martin all rolled into one! But the traveller who has elected to cross the Andes on a winter night has only himself to blame, and I supported the situation with philosophy. Yet I longed for the summit, and the easier riding downwards, for the up-hill climb is most fatiguing at such appalling angles, with benumbed hand clutching the animal's mane to keep the saddle from slipping back. For my breast-strap had been stolen—some part of your horse's gear always is stolen in the Peruvian sierra. One of the Peruvians was cursing the journey bitterly to his companions.

But at last a ray of comfort came upon us. Casting my eyes upwards from a turn of the precipitous road, I suddenly observed a wooden cross silhouetted against the fitful gleam of the occasional moon which looked out from tearing black clouds. No sight could have been more welcome. I knew it was the summit; for the devout Peruvian-Indian always places a cross at the highest point of a trail over a mountain range.

“La cumbre!” (the summit), I called to my followers, struggling up the precipitous path on their soroche-stricken and failing horses, and their satisfaction was as great as mine. A little further on, my man said, there was a *choza*, or Indian shepherd's hut (for these people feed their flocks right up to the snow-line), which might afford us shelter enough to make a cup of coffee. Up, up, therefore.

The summits of the Peruvian Andes of this region are of much topographical interest. They form the *divortia aquarum* of the South American continent. The snow and rain which had poured off my riding-cape in streams as I ascended, and the rills I had crossed, were to find their way to the giant Amazon, and so to the Atlantic, three thousand miles away; the rains and snowflakes upon which we were entering now had a destination very far removed, for their flow was to the Pacific Ocean. Thus I was upon the water-parting of the continent, facing towards the Great Pacific Coast.

I drew rein at the foot of the cross. Then I looked at my watch by the light of a match—it was twelve o'clock midnight! I looked at my aneroid barometer—it marked fifteen thousand feet above the level of the sea. I was much higher than the summit of Mont Blanc. All around was a snowy world of perpetual ice—the roof of these “glimpses of the moon,” which luminary came out brilliantly for a space and lighted up the savage landscape, flinging strange shadows from the snow-cornices of peaks upon their white façades and terraces, and carrying the eye to where, far, far away, the horizon was lost in the drifting wrack of snow and sky.

Lost in contemplation of the scene I rode on, and after a space was interrupted by the voice of one of my assistants. “Señor,” he said, “the choza is no longer there”; and gazing disappointedly down upon a plateau far below, where he said it had formerly stood, we observed nothing but bare grass and snow. A black shadow came over the face of the moon, and the pelting rain and snow once more closed in upon us. We had already been twelve hours in the saddle. The Peruvians had sustained their energies with draughts at their bottle of *aguadiente*, or native brandy, and I did not disdain a mouthful myself. Eight hours at least lay between us and the nearest village—eight hours more of snow and benumbing cold, cramped and weary. I was soaked to the skin; hunger assailed me, and as I rode along I savagely attacked the ham-bone with my teeth. When for a space the snow ceased falling I descended from the saddle and jogged along for miles on foot, leading my mule by the *riata*, or halter, so in this way restoring the circulation to my cramped limbs; and being a good pedestrian I soon outdistanced my companions. Again I mounted; again the sky grew black, the trail disappeared, and the roaring of a mountain torrent somewhere—perhaps a thousand feet below—fell on my ears. I drew rein suddenly, for I found I was upon the verge of empty space. The mule snorted with fear, and planted his hoofs resolutely upon the rock; and well was it we both acted so, for we had gone off the trail and were poised on the edge of a frightful precipice, as I observed a moment later when the moon came out. Turning cautiously I gave the mule the rein, and with native sagacity

THE ANDES: THE HIGH COLD WORLD OF PERPETUAL SNOW.

he found the trail again, and I waited for the Peruvians. Two of their animals had failed, and they were walking—a method of advance which the Spanish-American abhors. At least I had the advantage of being at home equally in the saddle or on foot, although I denied myself the motive-power of the brandy flask!

At last a faint flush appeared in the east as we reached the lowlands—the old sun-god of the Incas had not forgotten his snowy world: “the day-spring from on high had visited us.” Before us was a village, and never have I beheld the primitive habitations of man with such satisfaction as then. In the rural official’s house we found shelter and fodder and food, and my name was known there (as indeed it was in many parts of Peru, from my travels and articles in the Lima papers). Having given directions for the care of the horses and my own valiant mule, I threw myself upon my rugs and horse-cloths, with my saddle for a pillow, and weary for the moment of the Andes and of the world I was soon in the land of dreams.

XV

CHILE : THE LAND OF THE ENGLISH OF SOUTH AMERICA

TARAPACÁ—a name fraught with meaning and history on this vast southward-stretching littoral; these arid, surf-beat reaches of the Great Pacific Coast. I can never pass the barren shores of Tarapacá and Antofagasta without conjuring up the recollection of Grau and Prat: the heroes of the *Huascar* and the *Esmeralda*, who, in their death-grappling off this coast, found a sailor's grave and lie fathoms deep below the Pacific rollers. Who were Prat and Grau? you will possibly ask, kind reader. Their names are laurel-crowned in memory on this coast, and will never fade from the minds of their Chilean and Peruvian countrymen.

The story of the *Huascar* is of warning value to all nations whose safety depends upon sea-power, as did the Peruvian of last century, and as does the Chilean to-day—(to say nothing of Great Britain!).¹ The naval fight between the *Huascar*, the renowned Peruvian ironclad, and her Chilean antagonist during the Pacific War in 1879, was the first clash of armoured vessels which had ever taken place, and was of interest to all the maritime nations of the world. Off these barren coasts of Tarapacá and Antofagasta Admiral Grau of the *Huascar* kept the whole Chilean army at bay for months, until the Chileans put their own powerful ironclads in order and hunted the brave and persistent Peruvian unit down to the death. When the *Huascar* was captured Peru, bereft of sea-power, was at the mercy of her antagonist, and the terrible tale of humiliation and bloodshed which her own acts and the avarice of Chile combined brought upon her form the most bloody and terrible pages in the whole history of the Great Pacific Coast.

Had Peru possessed a single first-class ironclad even, the issue of the war might have been very different. As it was, the Chileans, who had kept up their navy, invaded Peru, cap-

¹ See my *Peru*.

tured Lima, the capital, occupying it for three years, during which time the whole country groaned under their oppression. To secure their liberty again, the Peruvians were forced to hand over, as indemnity, the province of Tarapacá, and its enormous wealth in nitrate, the greatest indemnity ever paid by any nation, as well as temporarily to lose control of Tacna and Arica; and only during the last decade has Peru begun to recover from the effects of the disaster, and to take her place among the progressive nations of South America.

The provinces of Tacna and Arica are held in pledge at present and jointly administered by the two nations, and whilst in justice they ought now to be returned to Peru, as soon as the arrangements connected with their holding are carried out, it is doubtful if Chile ever intends to let them go. Even during the present year fresh difficulties have arisen, fresh causes of embitterment between these two peoples—neighbours on the Great Pacific Coast—difficulties which at any time might disturb the South American peace by culminating in war.

The Republic of Chile, the brave and warlike country whose people have been styled the "English of South America," is a long, narrow strip of territory lying between the Andes and the sea: so long and so narrow that one writer on South America has said facetiously, that on the map the country was "two thousand miles long and two inches wide!" Actually, excluding the province of Tacna, which is debatable ground, the general length of the coastline of Chile is more than 2,600 miles; extending approximately from latitude 19° to latitude 56° S.—an enormous stretch of territory terminating in the Fuegian archipelago, down to Cape Horn. At this shattered end of the continent we reach, therefore, the southern terminus of our Great Pacific Coast, whose northern point we visited at Behring Straits, nearly twelve thousand miles away. We shall also observe that the last thousand miles of the coast of this continent is, like the shores of the extremity of the northern continent, broken and irregular, consisting of submerged mountain ranges, fiords, natural canals and islands, as in British Columbia and Alaska. Here, also, great glaciers come down to the sea, and the sphere of civilization ends in

a world of snow and ice, and an ambient of storms and elemental strife, fit termination to the antarctic-pointing Horn. Here, indeed, nature's forces, in the uplifting of the giant cordilleras which we have followed, seem to have reached their end, showing their lowered and jagged terminus.

Chile, structurally, consists in some part (from the 28th parallel southwards for four hundred miles) of a long central valley fifteen to thirty miles wide. This is bounded on the east by the snow-covered range of the main chain of the Andes, and on the west by the coast range—a range much older geologically than its mighty neighbour of cretaceous or tertiary times—the great cordillera of South America generally. The highest summit of the Chilean Andes is Aconcagua, rising to 23,080 feet above sea-level—probably the highest summit in the New World, and first ascended in 1897. Several other peaks pass the twenty thousand feet elevation, the Andes diminishing greatly in height as the southern extremity is approached. The coast range is continued interruptedly by the Chiloe and other islands, and the whole region has ever been, since its formation up to the appalling earthquakes of 1906, subject to earth-movements, which have greatly changed its configuration. The forces of Nature are still at work, fashioning the terminus of the Andes.

North of the region of this central valley the Andes recedes much further from the coast, as we have observed in Peru, and the northern part of Chile consists of the great arid deserts, the Saharas of Atacama, Antofagasta and Tarapacá. These deserts, however, whilst as regards vegetation they form the most appalling wildernesses which exist in any part of the globe, are, nevertheless, exceedingly rich in matters of the inorganic world: the minerals of nitrate or Chile saltpetre, silver, borax and copper—matters which have produced and are producing untold wealth for the commercial world.

But here in 1879, among the sand-hills and scant oases of this region, a devilish, bloody struggle took place between three nations—Peru, Bolivia, Chile—for the possession of the nitrate fields, and blood was poured out on those sun-beat plains and in those sterile cañons more freely than

TARAPACA . NITRATE-BEARING GROUND» AND “ OFICINA. »

water is to be encountered there. I ascended one day to a small plateau in the north of this region, and looking out over the burning plain I beheld the ground for acres in extent covered with bones, whitened and glistening in the sunshine. "What are those?" I asked of my native companion. "They are the bones of horses, señor," he replied. "And how came they here?" "They were the horses of a Peruvian battalion in the war, hamstrung or shot by order of a Peruvian general to prevent them falling into the hands of the enemy!"

The centre of this great region is the famous nitrate-shipping port of Iquique. You will hear about Iquique, good reader, long before you get there, as you journey down the long coast from Panama on the comfortable steamer of the British or Anglo-Chilean lines; and the main facts impressed upon you, both before and after your visit, will be first, the matter of nitrate export, and second, the matter of cocktail-consumption.

At the British Club in that enterprising town, both matters (the latter possibly with exaggeration) are awarded the honour of the world's record! It is commonly stated (again I trust with exaggeration) that ten to twelve cocktails before "breakfast"—which meal in Spanish-American countries is partaken of at twelve o'clock—is about the average of the regular Iquique man. Of this club, however, let us speak no evil. We have enjoyed its hospitality; it is an admirable institution provided with all the leading magazines and periodicals of Britain by every mail, occupying the best position in the town, and upon its library walls hangs a portrait of Edward VII Rex.

Another serious matter of which we shall hear much on this coast is that the distinctions between "mine" and "thine" are freely translated in terms of serious wharf robbery of imported goods. Boxes are freely rifled of their contents, and this constant stealing has at times reached a most serious pass. If you open a case of goods you will find a fair percentage of its contents lacking, stolen by stevedores or custom house porters.

The nitrate industry of Tarapacá and adjoining regions is very important, and its history, commerce and extraction

form the salient feature of the Pacific Coast in this part of America. The elaborate *oficinas*, as the nitrate-producing works are termed, are scattered all over the region near the coast, upon the various nitrate fields, whose names are household words to the student of the financial columns of London papers. Life at these oficinas upon the *pampa*, as the region of the nitrate deposits is collectively termed in the parlance of the coast, is stamped with a certain plutocratic British character. Great wealth has been made, and the evidences of it, and the upholding of certain marks of luxury and even refinement upon the edge of these appalling deserts is, of its kind, unique. Yet it is refreshing and stimulating after crossing, or sojourning in these deserts of the pampa to partake of the hospitality of the English oficina, and to don for dinner—invariable custom there—your evening dress. Far from relapsing into savagery in a savage environment, the Briton has created in Tarapacá and other places on that littoral centres of his own civilization, which he upholds to the credit of his race. But the British capitalist no longer holds unrivalled possession of the nitrate fields, for a marked feature of the country, of recent years, has been the German invasion, and German interests have acquired and are working various important nitrate oficinas.

Iquique is a not unattractive town, built mainly of wood, and the amount of business transacted there reaches a value of many millions sterling in the year; the greater part of it being in British hands. More than twenty million pounds sterling of British capital is invested in the nitrate works, of which there are more than a hundred; employing a considerable population, and forming the basis of the life of the town and ports along this part of the coast. The population of Iquique—Chilean and foreign—is more or less fifty thousand; and the city forms a Spanish-American centre of life in great contrast to older places, such as Arica or Lima, upon the Pacific Coast. It is naturally tinged by the foreign element. The city, notwithstanding the enormous amount drawn from nitrate export dues by the Chilean Government, amounts which reach several millions sterling per annum, does not, or did not until recently, pave its streets, which the continual watering with sea-water turn into surfaces of

mud. Moreover, the interior of the country shows no evidence of this vast output of wealth, in the *régime* of the roads, bridges or post-offices. The curse of international menaces and the cost of naval armament doubtless influences largely the available resources of the Chilean Government; and nitrate dues are soon translated into terms of battleships! There is no peace on these far-off shores of the New World; and, whether as individuals or as nations, people are preying upon each other to the best of their ability, as much, or more than in old Europe which gave them birth.

The hard-working Chilean *roto*, or native of mainly aboriginal (Araucanian) blood has long since learned to strike, like the Anglo-Saxon, when his rights are threatened, and the vast distinctions of class between the wealthy and educated Chilean and these stalwart and humble labourers are a great gulf which can never be bridged. As to the Chilean *roto*—who corresponds to the Mexican *peon* or the Peruvian *cholo*, he is a born worker and born fighter. It was the terrific onslaught of the *rotos* which overwhelmed the Peruvians at Tacna, Arica, Tarapacá and everywhere else in the Pacific War, and inflicted such terrible punishment—and often barbaric cruelty—upon the Peruvian soldiery, who consisted of the less warlike strain of the Quechuas and Aymaras of Peru and Bolivia. In fighting among themselves the Chilean *rotos* fight to the death, and one method of the duel among them is possibly unique. The two combatants are tied together (at their own request) side by side, when, armed with their knives, they set to, literally cutting each other into strips at times. Their singular temerity is unbounded; in a mining-camp where I stayed for a period a drunken *roto*, during some *fiesta*—and these are numerous—desirous of proving or acclaiming his valour "*como hombre*"—"as a man"—took a stick of dynamite and prepared it with cap and fuse. "A que yo resiste," he said to his companions—"I wager I can stand this"—and suiting the action to the word he lighted the fuse with his cigarette, holding the stick of dynamite in his hand. It exploded, blew his arm off and destroyed his eyesight, and the man was ruined for ever. This blending of endurance and ferocity in the Chilean is the heritage of the Araucanian

and other Chilean tribes who, in pre-Hispanic days, successfully resisted the advance of the Inca Empire. The Chilean labourers, as may be imagined, often form a problem for the British managers of the oficinas. Yet they have many good qualities: they are docile and not unreasonable when treated with justice; they are exceedingly hard-working and enterprising, and they greatly respect the British character. They spend all they earn, demanding luxuries of food and drink unknown to other native peoples of this character.

Iquique is situated upon the edge of a frightful desert, the desert of Tamarugal, and great sand-hills blown up by the wind seem to overhang it menacingly. Over these hills the nitrate railway goes to gain the pampa, and near at hand are the rich silver mines of Huantajaya. There is no vegetation, not a blade of grass or a shrub in the vicinity, and the town is dependent upon produce brought in by steamers, whilst its water-supply was formerly provided in the same way, but is now brought from an Andine valley-spring eighty miles away, an enterprise formed by a British company.

Wherever water is encountered in this arid littoral an oasis is formed—as at Pica and other places—and fruits and vegetables are produced. The region of Tarapacá, it is to be recollected, is a rainless one. Were it not so, indeed, the nitrate would not exist there. Nature, in her singular hydrographic operation on the coast, due to the presence of the Andes and the coast currents, as we observed in Peru, has imposed the curse of aridity on the region. Yet let us not call it a curse. It is far healthier than the littoral of Brazil, corresponding to that latitude, and were it a rainy region the soluble salts which nitrate consists of would have been dissipated ages ago or never laid down. Moreover, this great desert has, in a sense, conferred other benefits upon Chile; for it served as a fortification for her aboriginal people against the Incas of Peru, and preserved her autonomy again in 1817. I have ridden from sunrise to sunset over this appalling waste, and have seen neither shrub nor leaf nor reptile, beast nor bird—save the occasional vulture picking at the carcase of some dead mule, fallen by the side of the desert track and fast stiffening into dry buckram under the influence of the sun and wind. Bones only lay here and

GROUP OF CHILKAN ROTOS : THE STURDY PRODUCERS OF THE NITRATE

there, covered and uncovered alternately by the breath of the desert gale—the only vestiges showing that man had passed that way, for footsteps and trail are often covered up and disappear like the wake of a ship upon the “silent highway.” Yet stay, I must be accurate, good reader. There are other vestiges of man upon one part of the desert, for a line of bottles mark the way, as I have mentioned in another account—bottles thrown away by desert travellers, which strew the track across the plain for many leagues.

Up in the Andes beyond these deserts I lived for a period in the interests of a London company. This company had been formed (upon reports by a German chemist) to exploit what were described in the prospectus of the company as “mountains of copper sulphate.” Indeed the chairman of the board of directors, in an impassioned speech, said something to the effect that “Providence had preserved that great deposit of wealth for the benefit of the shareholders!” I investigated the “mountains of copper,” and found that they were unfortunately but small surface deposits; and so I reported. But the company had other advisers and did not accept this view, and in the meantime I was requested to continue the construction work at the camp. A large stone house, a veritable mansion, was erected, as far as the upper walls, a street laid out with stone cottages, and a settlement of Peruvians, Chilean and Bolivian miners grew to being, of which I was the virtual head. Then corroboration came of my report. Probably now the only inhabitants of the village and home are beasts of prey, and the desert wind whistles through those half-raised walls, built with the money of enterprising London shareholders!

Of mineral wealth in this part of Chile, however, there is much. Enormous deposits of copper ore exist, and at Collahuasi an important copper-mining industry has sprung to being in the last few years. A branch line has been built into this region from the Antofagasta and Bolivia Railway, rising to sixteen thousand feet nearly, in this excessively inclement region. When I first visited those mines, but a few years ago, they were little thought of, and some of them were unclaimed; but since then capitalists have been tumbling over each other to obtain possession of them at fancy prices.

It is another instance of the marvellous conquest of the desert, which, good reader, you will have observed is a constantly occurring phase of progress on this region tributary to the Great Pacific Coast. Near to these mines are other singular freaks of Nature's metallurgical laboratory, in huge gravel banks cemented together with a solution of copper silicates. The remarkable desert formations in copper of Atacama, moreover, are situated in this northern part of Chile.

In these seemingly voiceless and stricken deserts there is, to the thoughtful observer, much of acute interest and value at every turn. The weird rock-formation, ancient upheaved shores, cliffs, enormous beds of conglomerate and shells, rare minerals, dikes, veins, porphyry, tuffs, and all the strange and unique dispositions of Nature's upheaved and volcanic strata here on the roof of the world. Above it the mighty condor of the Andes soars, and everlasting snows upon the border of Bolivia catch the traveller's eye, as on soroche-stricken mule he traverses these high inclement plateaux. Tempted one day on a lonely journey through a long rocky defile by three young condors upon a rock-pinnacle, I descended from the saddle, tethered my mule, and, revolver in hand, hoped to stalk one of them and bear him off as a trophy. Useless: although scarcely able to fly they flapped away up the summit of a precipice, whilst the parent bird, gigantic and immovable, did not deign to stir from the rock-pinnacle where I had just beheld it as I ascended the cañon.

Other singular matters constantly arrested my attention in these high regions—12,000 to 17,000 feet above sea-level; whether of the mineral, animal or vegetable world. I have spoken of the "glacier meadows" of California, but here in the Chilean and Bolivian Andes are singular "glacier meadows" also, if I may term them such. They consist of great reservoir-like areas of morass, the whole floor of which is covered with "spiked moss" growing so close and low as to afford almost an impenetrable surface, except to an iron bar, and so firm that passage on foot or horseback may be effected over it. These great spongy areas occupy glacier-carved depressions, often near the foot of the snow-line, although at times away from the neighbourhood of the snow. They are valuable as natural reservoirs, in a sense, in that

they retain water from occasional rainfalls, and a small stream issues therefrom, where otherwise the valley would be absolutely dry. Another singular plant-growth of these high plateaux of Chile and Bolivia is the llareta or yareta (*Umbellifera*), which is a valuable source of fuel, and indeed the only one in some places. On the tufts of coarse grass at these altitudes a singular effect is seen—the sunny side of each tuft is charred, whilst the shady side is untouched or covered with a patch of snow; the effect of the midday heat and rarefied air. We must go slowly on foot here, good reader, “Mucho soroche aqui, señor,” my attendant arriero says, as I halt to get breath after ascending a steep slope on foot. He speaks of the soroche—the effect of the rarefied air—as if it were something lying about in “chunks,” and not a general atmospheric condition: and indeed he is not far wrong in a sense, for I have noticed as a singular fact that there is more soroche about in some places than others, as if it were influenced by the form of the particular cañon—possibly lack of wind passage. Upon these high, bleak plateaux great herds of the beautiful vicuña roam, and I have hunted them both in Chile and Peru, and their “venison” is excellent eating.

Few railways at present ascend the great zone of the Chilean and Bolivian Andes. The Antofagasta Railway, of which I have made mention before, is one of the most important of these. The province of Antofagasta formerly belonged to the republic of Bolivia, and formed its outlet to the sea, but she lost it in the Chilean War, and a few years ago acknowledged Chilean sovereignty thereto. The railway leaves the seaport of the same name—about 680 miles north of Valparaiso—and rises very rapidly, reaching an 1800 feet elevation in seventeen miles. A branch line connects it with the port of Mejillones, slightly to the north, a port which as a harbour is vastly superior to the general run of these open roadsteads of the Pacific Coast.

Thence the line enters an important nitrate region, with some twenty *oficinas*; passes Calama, a copper-producing centre, 7,400 feet above sea-level, having crossed a zone of territory irrigated from the river Loa—refreshing to the eye after the sterility of the coastal desert. At ten thousand feet

elevation the Loa is crossed by a fine steel viaduct, one of the most interesting structures of this nature in the world, and shortly we approach the San Pedro volcano, snow-capped always, smoking ever. The highest point reached is thirteen thousand feet on the main line, and 15,800 feet on the branch to Collahuasi, which place I have already spoken of. Beyond the summit, at Cebollar, is the extraordinary Borax Lake, which is a source of commercial profit to a well-known British company; and the gleaming white surface, 12,200 feet above sea-level, of this greatest borax deposit on the globe, arrests the traveller's eye from the train. Leaving these regions the line passes to where the panorama of the snow-clad Andes unfolds to the view; their culminating point, the grand Ollague, rising to twenty thousand feet, a giant landmark upon the Chile-Bolivia boundary line. Continuing thence its north-easterly route the railway reaches the Bolivian plateau, the southern portion of the great Titicaca basin, passes the town of Unini—rich centre for silver mines, among them the famous Huanchaca group, and thence skirts the eastern shore of the mysterious Lake Poopo, and reaches the Bolivian city of Oruro.

Lake Poopo is the sister lake of Titicaca, receiving its waters in the way that a saucer might receive the contents of a cup, their brims placed at equal heights; for Titicaca, 165 miles long and nearly 900 feet deep in places, overflows into Poopo, which is 55 miles long and nowhere more than 13 feet deep.

Lake Poopo is "mysterious" because, out of more than two hundred thousand cubic feet of water per minute which enter it only two thousand cubic feet leave it; whilst the whole remarkable system forms a hydrographic entity of peculiar Andine formation, which has no outlet for its waters save by evaporation. A subterranean outlet has been suspected to the Pacific Coast, but never proved to exist. The surface of these lakes is more than twelve thousand feet above sea-level. Titicaca is the largest fresh-water lake in the world; and upon its bosom we shall voyage literally above the clouds and out of sight of land. When we approach its eastern shore the snow-clad ranges of the Andes unfold to our view in their most stupendous part, the eastern Cordillera which overhangs

the Amazonian valley; sixty miles of unbroken snowy summits extending between the great uplifts of Illimani and Sorata. These Bolivian Andine giants both rise to more than twenty-one thousand feet.

This region of Lake Titicaca is reached either by the continuation of the Antofagasta line from Oruro to La Paz, the Bolivian capital, or by the Peruvian southern railway from Mollendo and Arequipa to Puno on the lake. A new line, moreover, is under construction, that from Arica on the coast—the Chilean-Peruvian seaport at the base of the fateful Morro, where the bloody struggle on the precipice took place in the war—across the Andes to the Titicaca basin. This line, whose construction is about to be carried out by a British firm for the Chilean Government, at a cost of three million sterling, will have a length of 250 miles, and crossing the coast desert will, by heavy engineering work, ascend and cross the cañons and summits of the Cordillera to the Titicaca plateau. It is to be recollected that this zone of territory is—politically—still a debatable ground.

The seaports of the coast of South America from Panama to Valparaiso, are subject to visitations of bubonic plague, and the consequent quarantine enforcements are exceedingly troublesome at times, although improvements have been made during the last few years. Coming down from the Andes near the Bolivian frontier across the arid pampas between the mountains and the nitrate region which forms the Chilean littoral or the province of Tarapacá—deserts whose western edge approaches Iquique, as before described—I heard of a serious epidemic of the plague and the rigid quarantine established at Iquique. When I reached the latter place, I found that the steamers neither came thither nor departed thence—the place was cut off from the outside world for the time being. Here was a pretty state of affairs; for matters called me urgently away by sea. Should I take horse and perform the sixty or seventy miles of hot, dusty ride to Tocopilla, where possibly a steamer—possibly, but doubtfully—might be obtained? I decided that I would try rather my luck by taking the nitrate railway to Pisagua, another port some thirty miles to the north, for there were rumours of a steamer there, and, having come down from the mountains,

instead of from residence in Iquique, I found I should escape, in all probability, quarantine detention. So I took passage in the *tren mixta*, or "mixed" train; the mixture consisting of a long freight train of open cars loaded with sacks of nitrate, with a solitary, bare, rickety passenger-car attached thereto at the rear. That journey, good reader, was interesting if not comfortable! There were about a dozen other passengers, and as the train swung round the sharp curves and down the steep gradients of the narrow-gauge railway we felt the bottom of the car giving way, and the whole structure seemed about to collapse! Fortunately the train pulled up at a wayside station before disaster occurred, although we spent an anxious quarter of an hour before it stopped. And there the officials informed us that there was no other passenger-car available—would the passengers like to finish their journey on the nitrate sacks? The passengers in a body declined or hesitated—all except myself. The probability of having to return to the plague-stopped Iquique, or of being delayed for weeks were far more formidable than a half-day's journey in an open truck, even under the burning Chilean sun. So I took my seat on a nitrate sack; my steamer trunk was hoisted up alongside, and away went the long train towards Pisagua, leaving a disconsolate group of native passengers around the wreck of their car.

In my travels I have generally found that a certain luck attends the traveller who resolutely takes time by the forelock; and what I may call a "good travel-luck" has generally accompanied me upon my long journeying upon the Great Pacific Coast. The train rattled and jolted from midday to sunset along the Pisagua nitrate railway, its solitary passenger grilled by the sun and covered thick with the white dust which arose from the dry deserts through which the line takes its way. But as we reached the edge of the desert, the summit of the huge sandy cliffs where the coastal plains of Tarapacá terminate, I looked down from the heights. What did I see? Something which filled me both with satisfaction and anxiety. There stretched the blue Pacific Ocean, and far below me the little port of Pisagua nestled, close to the long line of soundless breakers; and—and this was the source of my satisfaction—a steamer was

lying in the bay; a steamer with the familiar form and funnels of the Pacific Steam Navigation Company's vessels! Smoke was issuing from her funnels, and she had that appearance which betokened a speedy departure; and the last lighter had cast off from her side and was making its way to the pier. Moreover, as I looked, a burst of steam came from her syren, followed by the hoarse call which is the prelude to receiving the ship's papers from the captain of the port and for getting up of the anchor. Should I arrive in time?

The Chilean coast at Pisagua consists of a sandy precipice, rising almost sheer for thousands of feet from the shore to the desert plateau above, and down the face of this cliff the railway descends by a series of zig-zags, after the manner of several of the Chilean and Peruvian railways. Below is the town of Pisagua, and it and the railway were the scene of a severe bloody struggle between the Peruvians and the Chileans during the Pacific War in 1879, a few days after the capture of the *Huascar*, which I have mentioned before: engagements which were the precursor to Peru's loss of all her nitrate provinces. Down these zig-zags went the nitrate-train, and I almost forgot my anxiety for the steamer in the interest aroused by the topography of the route. Yet from time to time I turned my eyes to the bay, to see if she was under steam, and listened for the sound of up-getting moorings—listening almost against hope. As the train neared the town I was struck by the singular appearance of the place; it looked as if it had suffered from a conflagration, and in fact, as I alighted at the platform, I learned that two days before the whole town had been practically wiped out by a fire; its buildings, all being of wood, having soon been consumed. Also, I was informed, there was neither lodging nor—scarcely—food to be obtained. I did not want either if I could catch my steamer, whose funnels I could still see arising beyond in the bay. I rushed to the telegraph office whilst a sturdy Chilean boatman shouldered my trunk, for I had a cable to send before leaving. "You are not burnt out then?" I said to the clerk; to which he replied, "No, señor, we have been saved miraculously," and he pointed to a picture of the Virgin, which hung upon the wall outside, adding, "The

fire came as far as the picture, and stopped ! ” Down to the wharf I hastened, where the Chilean boatmen were ready to cast off. “*Vamos patron,*” they urged—“let us hurry,” “*El Vapor* is going ; *ya se hace a la mar.*” And indeed a hoarse whistle of departure sounded from the bay as I embarked. “Pull for all you are worth—ten dollars extra if you get me on board,” I replied.

Now if there are any men in the world who will do their best for you under such circumstances as these, these are the Chilean boatmen. As a race the *roto*, or native of Chile, is exceedingly “game” ; he loves a contest, and never gives in. Splendidly those two swarthy, wiry fellows pulled, as I steered the little cockle-shell over the waves of the harbour, her nose towards the hull—looming large now—of the English steamer. The rattle of the chains of the hauser-holes and the whirring of the steam-winch which was drawing up the anchor came towards us, and I could see the preparations for hauling up the gangway-ladder. But valiantly the boatmen pulled ; rounded the vessel’s stern, hooked on with their boat-hook, and up the side I went, followed by the battered steamer trunk on my boatman’s shoulder ; whilst even as we gained the deck the steamer turned her prow to the open sea. But it might go now ; I stuffed a ten-dollar Chilean bill and a handful of silver into the *roto*’s hand, and heard his “*Gracias patron,*” as he swung himself down a rope into his shallop ; and in a few minutes the burnt-out town of Pisagua and the zig-zag track of the railway up the sandy precipice were wiped out in the haze of distance. My good “travel-luck” had not deserted me, for had I missed that steamer I should have languished in Pisagua for a month !

It would be much more than inaccurate to carry away the impression on perusing these pages that Chile consists only of arid deserts, snow-capped mountains and savage scenery generally. These are, as ever, but the framing which does but accentuate the fertile plains and softer environment where the Hispanic civilization dwells. The Central Valley of Chile and its fertile and beautiful tracts of cultivated land, the handsome cities of Valparaiso and Santiago, with their characteristic life and refinement, the beautiful harbour and town of Valdivia, gemmed with vineyards, cornfields and

THE NITRATE-PORT OF PISAGUA.

luxurious haciendas, are in astonishing contrast with the aridity and consequent savagery of the north. For Chile, due to its vast range of latitude, embodies a correspondingly wide range of climate and temperature. As to the Chilean forests, the whole of the Pacific slope, from Valdivia to the Beagle Channel, a distance of five or six hundred miles, is timbered; and within the memory of man the woods extended as far north as Valparaiso. In this connection, also, I should make mention of the petrified forest stumps which I have passed in the pampa of Tamaragal in the arid north, before described, which go to show that in remote ages other climatic conditions prevailed there. Indeed, there are various evidences of such changes in other matters also, which it would not be within the province of this book to discuss. The mean temperature of the various parts of Chile are: 64° F. at Iquique, latitude 20° ; Valparaiso 59° , latitude 33° ; Ancid 53° , latitude 41° ; whilst in Tierra del Fuego the mean is 42° , latitude 55° . In the northern deserts, which I have spoken of, great diurnal changes of temperature are general, from 100° at midday to 36° at night. As to the rainfall there is none in those northern regions, whilst towards the south it rises progressively to nearly 150 inches below the 40th parallel; whilst snow falls on the coast zone south of that latitude, and a rainy, stormy region completes this, the lower end of the continent. Dense forests and extensive fishing-grounds form the main matters of human industry in the extreme south.

Santiago, the capital, lying in a beautiful valley inland from the port and city of Valparaiso, at 1,840 feet above sea-level, with an excellent climate, is typically Spanish-American, like its sister cities—Lima, Quito, Bogotá, Mexico, upon the great Pacific littoral; but the Chilean capital is immeasurably more progressive than any of them, except, perhaps, in its sphere, Mexico. The same domestic architecture of patios, barred windows, balconies, plazas, cathedrals, alamedas and the like, the chapters in stone from old Spain of colonial days we find here. Modern architecture, unfortunately, in all these cities of the Spanish-American West runs now too much to stucco and pretension. It is a time of transition. The old order is changing; the solidity and

refinement of viceregal days have given place to another phase. "Liberty, Fraternity and Equality"; showy public buildings, garish electric lights and elaborate penal establishments are the order of the day : but of real liberty and equality these republics have yet principally the theory and not the substance. Some sense of fraternity there is, admirable and pleasing in its way, of Don Quixote de la Mancha, which the whole of Spanish America has inherited in more or less degree. But the Chilean is a harder-headed man of the world in some respects than his cousins to the north; and the strenuous company-promoting and financial operations which at times are a feature of the country are worthy, in their lesser sphere, of London or New York. The Chilean gentleman is courteous, and the Chilean girl of the upper class attractive, like all her sisters of Spanish America. Indeed, the foreigner who stays in these countries will rarely escape from taking his life's partner there—save as there may be safety in numbers! As to the young men of fashion, neither in Chile, Mexico or Peru can we hold them up to example, as a rule. They lack vigour and the strenuous life, and are too much addicted to the allurements of their cities. They should get out into the country and take a course of exploration.

The most important industrial matter in Chile is her nitrate, which I have mentioned before. Chilean capitalists, in addition to British and German, have millions of dollars invested in this business. It is always a great question if the country benefits by this somewhat easily got wealth : it corrupted the Peruvians when they were the owners of it; and it is freely stated that the Chileans are being spoilt by its possession. I will translate—freely—a paragraph from a Chilean paper of recent date, one of the leading organs of Valparaiso,¹ in order to show Chilean criticisms of themselves—

"The nitrate industry has produced for Chile, since 1880, more than a thousand million dollars. This enormous sum has been ill-spent or wasted in great part without the country receiving from its governors any benefits which might be called such. Neither railways, wharfs, ships, coast defence works, sanitation works, nor sufficient schools nor libraries are found where they are wanted. Sumptuous public

¹ *El Mercurio de Valparaiso.*

CHILE: VALLEY OF THE CACHAPOAL.

buildings and houses in the capital alone, it is true, have sprung up, leaving other places in abandonment. But if no real progress has been assured the nitrate revenues have afforded a splendid panacea for hungry office-seekers, pensioners, and for nepotism generally—pleasure journeys to Europe or North America at the public cost under pretext of scientific commissions or for encouraging immigration ! ”

Of course, in this connection it must be recollected that Spanish-Americans are fond of attacking their own institutions, and whilst there is much of truth in the above, possibly the English of South America suffer from national pessimism at times, like the English of Britain.

The Chileans have also acquired the soubriquet of the “Yankees of South America,” from their marked spirit of enterprise over their South-American cousins generally. But the Chileans do not love the Americans, or “Yanquis,” as they term them. Early in the year 1909, when the American squadron stayed at Valparaiso, the Chilean papers congratulated themselves that no serious fracas had occurred with the American sailors as on other similar occasions. “Sober, the American sailor is not a bad fellow,” says a leading Chilean paper.¹ “Drunk, he is a brute who respects no one, especially the people of a small country.” The fact is that the American has inherited the British trait of despising weaker people of a darker skin than his own, but he does it much more offensively than the Briton.

Valparaiso, like Callao, has suffered severely from two elements in its past history—buccaneers and earthquakes. Drake in 1578, Hawkins in 1596, Von Noort and other sea-thieving Dutchmen later. Appalling earthquake shocks and tidal waves throughout all these centuries culminated in the awful holocaust of August 1906, when the whole city was wrecked, and people, variously estimated between hundreds and thousands, perished. The population of Valparaiso is about 150,000, and that of Santiago 325,000.

Valdivia, of which mention has been made, lies about five hundred miles south of Valparaiso, and is the centre of an important and prosperous German colony, whose foundation was laid in 1850. State-aided emigration for British colonists

was inaugurated to people the southern lands of the republic some time ago, but, in general terms, this has been a failure.

Chile has been magnificently endowed by Nature with mineral wealth—apart from the nitrate—and her copper mines have yielded a large part of the world's stock. Coal also exists, and coal-mining is among the important industries of the country. Chief among the coal-fields are those of Lota on the coast. But the import of coal from Britain and from Australia far exceed the home production. As to agriculture in the temperate regions of the zone of Santiago, rich crops of wheat, maize and flourishing vineyards are the basis of industry; the wine of Chile being famous upon the coast, and its manufacture and sale having produced several Chilean millionaires. Alfalfa also is freely grown, but all these products are cultivated under irrigation, as is the case in the Central Valley. In the Concepcion region, however, south of Valparaiso, irrigation is little required, and this strong and vigorous centre supports a good agricultural class. Cattle-breeding is an important branch of its industry. Great lumbering and farming possibilities exist in this southern region, whose latitude, it is to be recollected, is more or less equivalent to the northern latitude of San Francisco in California.

Of railways we have already noticed the northern systems—an existing and a projected trans-Cordilleran line; the nitrate railways, and various shorter systems from coast ports. The Great Central Valley is traversed in part by a railway uniting the capital and the various towns and seaports of Chile's fertile and prosperous regions. From Santiago the Great Trans-Andine Railway takes its way, the interoceanic line to Argentine and Buenos Ayres, whose completion is expected to be brought about in 1910.

This line, whose route over the Great Cumbre, or summit, is of historical interest, is 888 miles long from the Pacific to the Atlantic. Ascending from the Pacific Coast at Valparaiso the line perforates below the pass, whose considerable elevation is 12,600 feet above sea-level, and exceedingly heavy engineering work has been involved, culminating in extensive tunnelling; the elevation of the tunnel being 10,460 feet. Nature displays her Cordilleran handiwork in stupendous

THE SNOWY ANDES OF CHILE PEAK OF ACONCAGUA.

form in these high, inclement regions—mountain scenery grand and imposing. Outlined against the azure of the Cordilleran sky is Aconcagua, a black basaltic mass, capped with a mantle of gleaming snow and ice. The austral winter of this region is one of terrific snowstorms, which fill the passes with intransitable drifts. In the open season, from November to April, which constitutes the spring and summer of the south temperate zone, traffic is maintained, pending the completion of the line, and by stage coach and on mule-back; but in mid-winter the traveller crosses at his peril, avalanche and snow-drift threatening him, or causing enforced isolation in mountain shelters. It is to be recollected that this railway route is one of the main lines of travel from Europe to the towns and seaports of the Pacific Coast of South America; the traveller taking between that route and the Straits of Magellan or the Isthmus of Panama.

It was over this high pass that San Martin and O'Higgins—liberators of Chile and Peru from the power of Spain—made their famous march in 1817. To-day it forms part of the dividing line between Chile and Argentina, which nations regard each other across it with the stony gaze of an armed peace, yet respecting the boundary awarded them by the arbitration of King Edward of Britain. Moreover, upon this high pass, thirteen thousand feet above the level of the sea, these nations erected and unveiled, in 1904, a remarkable monument; and the native or the traveller, as he scales the inclement heights, is reminded suddenly of the mandate of the Prince of Peace, for, arresting his gaze, fronting upon those eternal Andine snows, is the colossal bronze statue of "El Cristo de Los Andes."

XVI

TO SUM UP

WE have finished our survey of the Great Coast, and have only to consider it from the general aspect of "world-politics." It has been a theme of some writers that the Pacific Ocean is destined to become the main centre of human activity in the future; that, just as this centre shifted from the Mediterranean to the Atlantic, so will it move from the Atlantic to the Pacific. To agree with this assumption involves the unpalatable supposition that the yellow race is to predominate in the future; and this we shall beg leave to reject. We believe that the leaders of civilization are to remain the European races and their American (and Australian) offshoots. It is true that these occupy the whole of the Great Pacific Coast of America (and Australia on the other side); but Japan dominates in the Western Pacific—Japan who has worthily forged to the front so recently—and behind her, geographically and ethnologically, is the slumbering giant of China, rubbing his eyes now, and awakening. We shall refuse to believe that the sceptre of civilization is to fall from the hands of the Christian nations; and in any case we have marked across the Great Pacific Ocean that splendid diagonal from British Columbia and California to Australia and New Zealand. Let the giant awake.

As to the "yellow peril" on America's shores, the Mongolian race is already excluded from settlement or immigration in Anglo-America. Not so, however, in Spanish America; and Peru, Ecuador and other countries of the littoral view with tolerance, and even encourage, Japanese immigration. Chinese have been freely brought in in the past—and were generally brutally treated—and now shiploads of Japanese are arriving at Callao. British and other sugar-producing firms upon the Peruvian coast are employing numbers of them, and state that they prefer them

QUECHUAS OF THE PERUVIAN ANDES, IN THE YUCAY VALLEY, AND INCA FORTRESS.



to the native Cholos. Mexico says that she looks with equal favour towards Asia as towards Europe, as the "bridge of the world's commerce." Also it must not be forgotten that there is a certain affinity between Asiatics and the Peruvian and Mexican indigenes; a heritage, perhaps, of the supposed Asiatic origin of the Aztecs and Incas. I have often been startled, in remote parts of these countries, to observe the "Mongolian" face among the Indians. But the student of race-conditions would deplore to see the lands of Spanish America stuffed with Asiatics, for these lands are really a heritage for the European peoples, only awaiting the flow of population that way; and probably growing enlightenment among Mexican and Peruvian governments will cause the Anglo-American policy to be followed in this respect.

We have seen how considerable a range of peoples, alien and indigenous, inhabit this great littoral and the regions tributary thereto. First, we have the Anglo-American people, of white, highly-civilized races, as represented by the inhabitants of British Columbia, largely of British stock, and whom we have given priority of place as regards civilization upon the coast: and the people of California and others of the western states of the United States, British in language and character also, but with a large admixture of other races and ideals. Second, the Spanish-American peoples, occupying an immense territory as different nations, but varying only slightly from their general type notwithstanding; with the basis of a high type of civilization distinct from the Anglo-American. These have their offshoots of mixed peoples, such as the Peones, Cholos and Rotos, of Mexico, Peru and Chile respectively; all civilized, Christianized people in a measure. Third, the pure Amerinds; the Indians inhabiting the coast region, in places, of both North and South America; and the Eskimos of Alaska. As to the origin of all these latter groups, the general assumption is that the country was peopled both from Asia and Europe, in the Stone Ages, when these continents were connected with America *viâ* Behring Straits, on the one hand, and *viâ* the Faroes and Iceland on the other; for it has been shown that both the short-headed Mongol and the long-headed European types seem to be present among the Amerinds. But the unique

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civilizations of Aztec and Inca were undoubtedly from Asia and Egypt, as before discussed. To-day the Amerinds are of exceedingly varied type and of all grades of capability, from the intelligent native people of Mexico down to the abject naked type of the Eastern slopes of the Andes. These latter, however, are absolutely cut off from the Pacific littoral by the Andes. The Incas kept them back with a chain of forts, even if the inclement climate of the uplands had not been a sufficient deterrent. Nevertheless, the naked savage of the ultra-montane regions overflowed round the southern end of the Andes, as evidenced in the remaining Indians of the extreme south of Chile, whose customs are only comparable with those of Drift Man. These are the Yaghans: naked in their canoes, and throwing their women overboard to lighten them in a storm and secure their own safety. This is, perhaps, the most striking example of the "strenuous life," as interpreted in America to-day! Everywhere along this coast does civilization rub shoulders with barbarism. In Vancouver the Indian and his wigwams and totems are almost part of the fringe of white life; in California the degenerate red man drags out a lazy, vicious existence among the white usurpers of the soil; in Mexico some of the Pacific Coast tribes still venerate crocodiles as their spiritual kin, whilst higher in the scale the sandalled and blanketed peon rubs shoulders with the frock-coated or Parisian-clad Mexican of the upper class—conditions analogous to those obtaining in Peru, Ecuador, and Chile. In Peru, however, the vigorous Cholo of the Andes still strives to maintain, against the unfair land laws of the European race, his small holding of the "Andenes" on his splendid, inclement uplands: his little land-patch, which supports him and his family; a happy remnant of Inca times.

We have, therefore, on the Pacific Coast of America, two distinct types of civilization: the Anglo-American and the Spanish-American, working out their several destinies side by side; the boundary line between them being the northern frontier of Mexico. Both civilizations contain much of value; both have much to learn from each other. The one has commercialism as its mainspring principally; the other a species of idealism, as yet largely futile, but containing much

of value—more than is at present admitted—for the future of civilization in America.

The Spanish-American character is much more complex than the Anglo-American. It has been said that the Americans of the United States are all born engineers; with equal reason it might be averred that all the Latin-Americans are born lawyers, for what Nature denied them in ingenuity she made up in sophistry and eloquence, and with twisted phrase and forestalled argument they leave the stupid Northerner agape! Yet there is much that is attractive in their social life and idealism; much that is of value as an offset to the Northerner's sheer commercialism. We may beg leave to doubt whether the strenuous American in the twenty-fifth storey of his sky-scraper, deafened by the eternal clack of his typewriter (the mechanical voice of deep schemes for pelf), necessarily represents a higher civilization than the eloquent and idealistic Spanish-American in his pastoral environment. The wonderful vitality of this race is nowhere more evident than in its unanimity of language and customs and institutions throughout this enormous world of Spanish America. Perhaps the simplest and richest language in the world is Spanish, and the most virile next to English. The capitals and towns of Mexico, Colombia, Peru or Chile all bear a similar stamp, and their customs and ideals vary little one from the other. Yet the Spanish-American peoples have grave race defects to overcome, as they have also difficulties of environment. On the one hand, they dwell in lands surrounded or traversed by stupendous mountain chains or menaced by unhealthy lowlands, and on the other their development is marred by a spirit of unrest. When one has to cross mountain passes above the snow-line to reach the next town, and on arriving there finds that some one has launched a *pronunciamiento* and proclaimed himself president, life naturally takes on a different aspect to that in England or the United States. At present these handsome, isolated "Madrids" of the new world are at some disadvantage in point of access—perhaps the new science of aviation will benefit them! Moreover, who can doubt that there shall yet be discovered some use for these great high places; some new element depending upon elevation, valuable

to the scientist and to humanity to-morrow. In all the Spanish-American countries the principal internal question largely resolves itself into a race problem. Their people consist of a small educated upper class who monopolize the wealth and knowledge of the community, a great bulk of lower class formed of the mixture of both races, and almost an equal bulk of Indians. What is to be their future? In Mexico only about thirteen per cent. of the population can read and write; in Peru and other South-American countries the proportion is much less; whilst in none of these is there any bulk of a middle-class people, such as forms the mainstay of civilization everywhere. Fortunately this race problem is not attended by any race antagonism. It is true that there is a yearning to be considered of white skin, but there is no antipathy between the whites and the red (or brown) part of the population, and fusion and intermarriage go on day by day—conditions which have never been brought about between the white and black races. The aborigines of Mexico and Peru are far superior to the negroes or the Mongolians, or will be when civilization overtakes them, and there is no bar to their assimilation with the whites. Indeed, they form a good substratum constantly being drawn upon, and, from Mexico to Cape Horn, there is growing to being a brown race, ever increasing in civilization dominated by the excellent Hispanic ideals. Their faults have been shown to the world by every traveller; their virtues have been rarely depicted.

The main question appears to be as to whether these people are to develop under the *régime* of commercialism, as the Anglo-Americans have, or whether nature has any other (and easily more noble) method in store for them. Their great need is for more ideas and people from the outside. The overflowing and highly-civilized German peoples might well look that way as a field for emigration, and indeed they are beginning to do so. At present there is not much indication on the part of the governing classes of Spanish America towards any philosophical or organized use or distribution of natural resources in those countries. Mexico is a land of big landowners and a semi-serf peon race; Peru is "a beggar sitting upon a heap of gold"; in Chile a few fortunate

capitalists dig nitrate wealth from the ground and revel in luxury at the expense of a great bulk of rotos, or semi-Indian workers. All these countries consist of huge areas of lands full of natural resources, each many times the size of the land of European nations, with a mere handful of a few million inhabitants—nearly all poor. Yet no philosophical effort has ever been made to apply natural resource to human insufficiency. However, it would be impertinent of the foreigner to criticize too closely this condition, for such a principle of distribution or organization is not carried out even in Britain or the United States; or anywhere else. In Canada and California, instead of great areas of land and resources being set aside for the use of communities and citizens, the conditions of the old world are simply being reproduced in the giving of the land up to syndicates, share markets, and those who can afford to purchase or spend money upon it. True civilization will begin when this ends or is modified, and when a sufficient portion of the land is looked upon as an imperial asset, to go against taxation.

Upon this great Pacific sphere the main work of man's hands at present is the reclaiming of the wilderness. But the conquest of the desert seems to be undertaken mainly by the peoples of Anglo-American race: the Spanish-American scarcely puts his hand to the work of the pioneer. He loves the professions and the political arena, where, if work he must, he can do it in a black coat. He talks grandiloquently of progress, but does not put his hand to the plough. In Latin America there is no class of people corresponding to the farmer and his men of English-speaking countries, for the young man with any strain of white race will not work in the fields, but prefers to pass his life behind shop counters, selling half-yards of ribbon to bargaining señoras and señoritas; or giving short weight in pounds of lard and cheese to the native purchasers! Probably no country can ever be truly great in which a portion of its people do *not* dig the soil; for the actual contact with Mother Earth is that which give physical stamina and mental balance. A "nation of shopkeepers" alone must be a nation of usurers; and, moreover, "shopkeeping" cannot always last in the development of civilization, as a nation's main occupation.

The conditions of elevation above sea-level enter much into the matter of development upon this great coast. The highest point of human habitation in Europe, that of the monks of St. Bernard, is less than 8,500 feet, an elevation which in Peru or Bolivia would be considered a mere half-way house to large cities at altitudes of 11,000 or 14,000. I have engaged in horse-racing on a regular course at 10,000 feet, and lived for long periods in small communities at 17,000 feet. In the latter the conditions of ordinary life are not much changed to the hardy native, but are trying to the foreigner, although the tonic air and bracing environment are often enjoyable and invigorating to those of strong heart, who do not fear the "soroche" or "mal de montaña." Indeed, the uplands of the Andes from 8,000 to 12,000 feet above sea-level are splendid regions for a vigorous race.

As we have seen, the great Cordillera all along the coast, which it parallels, and the height at which railways cross it, is a determining factor in industrial development. Thus it is instructive to cast a glance at the principal summit-crossings of the trans-cordilleran railways, as follows:—

Grand Trunk Pacific . . .	3,712 feet.	British Columbia ¹
Canadian Pacific . . .	5,299 "	" "
Great Northern . . .	5,202 "	Washington "
Northern Pacific . . .	5,569 "	" "
Southern Pacific . . .	8,247 "	California
Santa Fé . . .	7,510 "	" "
Mexican Central . . .	5,250 "	Mexico
" " . . .	10,000 "	" ¹
Tehuantepec . . .	730 "	" "
Panama . . .	300 "	Panama
Guayaquil and Quito . . .	12,000 "	Ecuador
Payta-Marañon . . .	6,600 "	Peru ¹
Oroya . . .	15,660 "	" "
Peruvian Southern . . .	14,660 "	" "
Arica-La Paz . . .	12,000 "	Peru-Chile-Bolivia ¹
Antofagasta . . .	13,000 "	Chile-Bolivia
Transandine . . .	10,460 "	Chile-Argentina

Which of the states of the Great Pacific Coast may be expected to develop to greatest importance? It depends upon two factors—topography and race. Peru and Chile are

¹ Under construction or projected.

VIEW ON THE CANADIAN PACIFIC RAILWAY AT YALE, BRITISH COLUMBIA.

much restricted to coast strips, cut off from the interior by the Andes whose passes are rarely lower than twelve thousand to fourteen thousand feet above sea-level. Behind them, it is true, are the boundless regions of the Amazon and La Plata regions, but these belong to the Atlantic sphere. Colombia and Ecuador are in similar condition; Mexico less so; whilst as to their peoples they are generally non-inventive and non-manufacturing in character. In this connection, however, these countries are being invaded—not politically—by commercial peoples. California also consists of a coastal region barred from the interior of the continent by a great cordillera, backed, indeed, by a mighty sahara. In British Columbia, as well as Oregon and Washington, we have a less divided region, with huge rivers and valleys coming from the interior to the sea and somewhat breaking down the inevitable andine structure. In British Columbia also we have the people who are most advanced in respect for the law; their heritage of British character; and this, added to the influence of the “induction coil” of energy of their American neighbours, and the circumstance of their topographic environment, would seem to point to this British Empire front as a land of perhaps more ideal conditions for rapid progress than their neighbours.

Turning now to possible political or geographical development or menace among these communities it must be recollected that there is a certain class of Americans which has been termed the “North Pole to Panama” school; that is, their ideas of territorial absorption would include all the regions coming within those points! This would include the British Dominion of Canada (which, it is to be recollected, is larger territorially than the United States), Mexico, and the Central American states. But this school, which at the close of last century showed a tendency to grow, has fallen off with the growing sanity of American foreign politics. As regards Mexico and Central America it is very doubtful if such conquest will ever be regarded seriously by the Americans, notwithstanding the fears that have been entertained in Spanish America by the political acquisition of the Panama strip. The Americans are too sensible a people to saddle themselves with the governance of a people of

another race; they know that they have not the genius for governing it (as Britain has), and their experiences in the Philippines and Cuba have had the effect of a great shrinking in the "imperial" tendencies which the defeat of Spain momentarily engendered. There is a school of thinkers in Europe which professes to see an American menace ever active towards Mexico and South America, and who look for territorial expansion by the United States; but this school is probably misinformed. The straightforward behaviour of the United States towards Cuba is an evidence of good faith, which even their machinations regarding Panama cannot set aside. The Mexican need not, in normal conditions, fear an American invasion. The Americans, like the British, are not fond of rattling the sabre, and the occasional exhibition of the "big stick" comes under quite another category. As regards the possibilities of American menace to Canada, the United States has shown no predatory instincts, although what the future might contain he would be a wise prophet who might prophesy. But there are no indications of menace; and the United States has still its own enormous western territory to develop. Canada in the course of one generation will be a Power itself, and both nations are developing side by side in neighbourly attitude. There is a remarkable "American invasion" of Canada taking place at present, it is true; an invasion of a useful element of farmers from below the border.

As to the vulnerability of the United States there is always the possibility of Japanese menace, and in the coming growth and dominion of the Pacific such may arise, as indeed questions have arisen in the recent past between the two nations. San Francisco and Puget Sound ports might be taken, but it is doubtful if they could be held, once the American leviathan were aroused. The Anglo-Japanese alliance, moreover, if it continue, ought to be a factor for peace always on the Great Pacific Coast. In the event of a war with any maritime nation the most pregnable part of the United States would be Alaska, which might be lost, and which would require a fleet to protect it which could be ill spared from work elsewhere. The rapid rise of British imperial union and the beginning of a Canadian navy has

BRITISH SEA-POWER ON THE PACIFIC PART OF ESQUIMALT HARBOUR, VICTORIA, BRITISH COLUMBIA.

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an important bearing upon the coast; and an added bulwark—if such were necessary—against Asiatic attack. A Canadian navy at Esquimalt and an Australian and New Zealand navy, moreover, will ensure for Anglo-Saxon power the great diagonal from the North-Eastern Pacific to the South-Western Pacific.

The most disturbing factors among the Pacific Coast peoples of South America are questions of boundary and possession. The bitter controversy between Peru and Chile upon Tacna and Arica, heritage of the nitrate war of last century, has not been stilled; rather it has taken on an acute form again: Chile withdrawing her minister from Lima for an alleged slight in the non-acceptance by the Peruvians of a wreath which the first-named country had sent to be placed upon the monument commemorating the names of those who fell in the war. Whilst the observer cannot fail to sympathize with the Peruvians, as to the past terrible losses they experienced, it is evident that they are often haughty and yet pusillanimous; whilst the Chileans are tenacious and grasping, and pretend to a sense of justification and of contempt for Peru. This is tempered by a dread that Peru may become a strong nation again and is but biding her time. Peru is forming her navy again slowly, but it is doubtful if this could ever compete with the Chileans, who are born sea-fighters, and who, moreover, have enjoyed the tuition of British sailors in the past. It is time that a mediator should offer its interposition to settle this rankling question.

What the political and commercial effect of the Panama Canal will be is largely a matter of conjecture at present. It is to be recollected that the political and commercial world lies principally—almost wholly—to the north of the isthmus, with ninety-five per cent., nearly, of the world's population, and as regards Europe and Asia little advantage is gained over Suez. Indeed, as regards the United States, it has even been objected by Americans that the effect of the Canal will be largely to the benefit of Japan! As to South America it must also be recollected that the Pacific littoral embodies less than ten per cent. of the whole area of the continent, with possibilities of expansion in commerce which must depend largely upon its railway development eastwardly. It has yet

to be shown that freight costs *viâ* Panama, whether east or west, will be, as regards the Americas, cheaper than those of transcontinental railways. Other matters which have been urged against the canal are the difficulties of its maintenance. It has been said that these will be greater than those of construction, and that the lock-type of canal in this region will be subject to the danger of floods, swollen rivers, bursting dams, earthquakes and other matters. On the other hand it is urged that all these are imaginary difficulties which engineering science can overcome. So far from the canal not being of general utility it might be necessary, with the rise of the Pacific Ocean as a world centre, to duplicate it; and then perhaps it will be the turn of Nicaragua to lend its isthmian route to the spade, or even that of Tehuantepec. It is to be recollected that, long ago, a United States commission reported that a Tehuantepec canal would be a natural prolongation of the Mississippi River to the Pacific Ocean! Remarkable it seems, in this connection, that the idea of the ship-railway has died out. Probably it must recur, if the prophesied commercial rise of the Pacific takes place. The project has never had justice done to it. There is probably no mechanical impossibility in running a ship into a dock and running ship and dock and all across a solidly-constructed tramway from sea to sea, which a ship-railway might essentially be. It might prove even less costly and difficult than making the ship climb a lock-stairway, such as the Panama Canal will be. The future shall decide all these matters of the utility of this great canal; for the present we are content that man's ingenuity has called for it and is accomplishing it.

In considering the future of much of this Great Coast, climate must be taken into account. The climatic conditions of the Pacific littoral of both North and South America are generally superior to those of the Atlantic littoral. British Columbia and Alaska, with their temperate, habitable regions, are in great contrast to the ice and fog-bound coasts of Labrador; California, with its delicious climate, to the extreme of heat and cold of New York; and Peru and Chile, dry and temperate, to the hot and humid climate of Brazil, as I have shown elsewhere. If the coast is restricted by the Cordillera it at least offers the traveller or dweller a choice

of climate in a day's march, ranging from tropical to arctic, according to the elevation he may choose. The malaria encountered upon the coast, from California to Chile, is not malignant, and is easily susceptible to remedy. Indeed, the region provided its own remedy—the *cinchona*, or quinine of commerce, which Peru gave to the world when the wife of a viceroy fell ill of a tertian fever in 1630, and was cured with doses of the bark. Yellow fever and bubonic plague are now of restricted occurrence, and improved sanitation and quarantine measures are rendering these scourges less troublesome day by day.

Many staple articles are produced upon the coast, to supply all its own wants and for large export trades. Thus, in their places I have described the timber of British Columbia, Oregon and California; whilst the forests of Chihuahua in Mexico, and of the south of Chile contain vast areas of commercial wood: yet all these sources are being denuded; no one, save on a small scale the United States Government, is troubling themselves with replanting, and exhaustion will loom up within few generations. Wheat is the real "gold" of the North Pacific—British Columbia and Oregon and inland thence—but we shall not forget that the Chinaman has gone home with the taste of wheat in his mouth, and has talked about bread to the yellow hordes of rice-eating Asia. Will they ask soon for American wheat? Let them do so; there are unbounded areas for the produce of maize, rice and bananas, and nature has so disposed it that none shall starve if they bestir themselves. Cotton in Peru can supply all comers, sugar in Peru and Mexico also; wine from California and even north of that, and from Peru and Chile can supply all demands. Chocolate from Ecuador, as it is, largely feeds the world with that valuable product, and coffee from Guatemala is a famous staple; cocaine from Peru supplies the world's markets. Fruit from all the countries of the littoral is produced in infinite variety. Indeed, it is one of the most remarkable conditions of British Columbia and California—the development of horticulture; and in their different sphere the tropical countries are lavish producers of fruits. Of minerals we have the largest copper and nitrate deposits in the world, facing the Pacific Ocean, in Peru and

Chile respectively; while the gold, silver, coal, and other essential matters of commerce are household words of all the countries of the littoral. Water-power is another gift of the great Cordilleras, from north to south. The heart of man may take comfort from all this wealth, a large part of which is lying fallow, waiting for him to come and take it.

And thus, kind reader, we bid farewell to our Great Coast—a giant who is but rubbing his eyes from the slumber from which the Columbian age awoke him. There rise before us the works of man and the works of nature blended in our retrospect. The white cliff-like tower-buildings of San Francisco, Seattle or Los Angeles, set by the heaving Pacific waves; the white, glorious snow peaks of the Cordilleran ranges, from Alaska to Peru and Chile. Smoking volcanoes there are, set between them; fire disputing the realm of ice. Lost in the profound forest of the north we have been, and we have traversed high bare steppes above the line of tree-life in the south. Vast stretches of desert we have toiled over, coming down to coasts surf-beaten for thousands of miles, between the few, desired havens. Framed between our horses' ears are the blue distances and the hills, and our footprints are blown from the sand as we pass. We have stood upon the water-parting of America, at its highest summits, and with veneration have laved our hands in the headwaters of its mightiest rivers. Much of satisfaction there is in having compassed it; much of pleasure we feel as we contemplate it. And whenever our eyes seek the far horizon towards which our faces are ever set we recollect that we are all travellers, whether in the abstract or the material world, or both; travellers in a vast field where every earnest foot-step serves to set the confines of the known farther and farther forward.

THE END

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